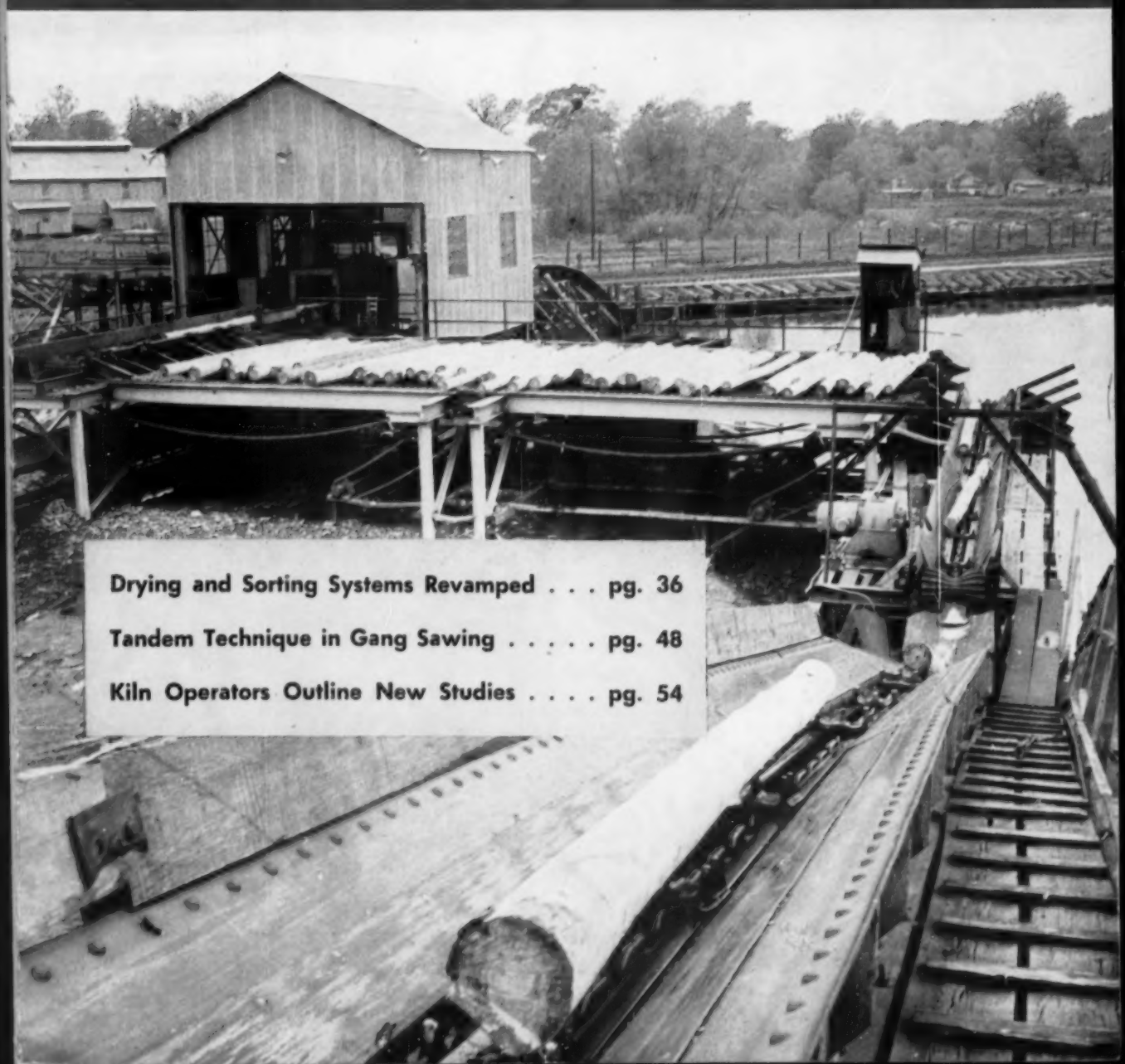
JUNE 14, 1957

THE Lumberman

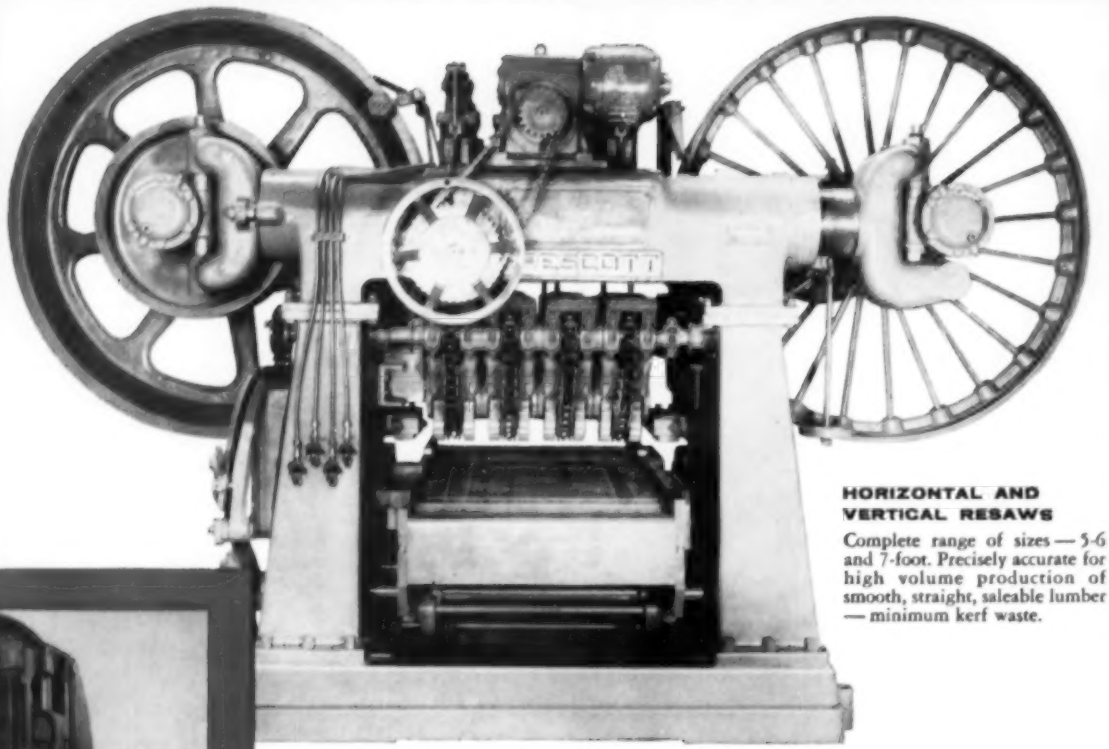
LUMBER PLYWOOD BOARD WOOD MANUFACTURING



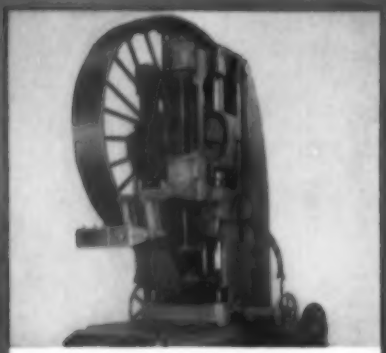
Drying and Sorting Systems Revamped . . . pg. 36

Tandem Technique in Gang Sawing . . . . . pg. 48

Kiln Operators Outline New Studies . . . . pg. 54

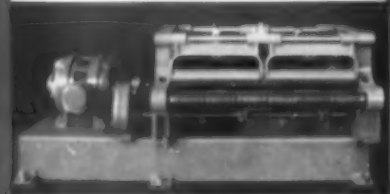


HORIZONTAL AND VERTICAL RESAWS
Complete range of sizes — 5-6 and 7-foot. Precisely accurate for high volume production of smooth, straight, saleable lumber — minimum kerf waste.



BAND MILLS. Complete range of sizes—5-6-7-8-9 and 10-foot. Single or double cut — right or left hand. Minimum vibration — smooth, high speed operation. Ultra-sensitive knife-edge straining device.

CARRIAGES. Rack and pinion or screw block. Medium and heavy-duty. Right and left hand. Air or electric setworks and dogs. Structurally superior wood or steel frames.



EDGERS AND TRIMMERS. Eastern and Pacific Coast Edgers. Overhead and undercut trimmers. Sizes and types for both large and small mills. Designed and built for peak production of perfect lumber.

GREATER PRODUCTION *of Better Lumber* *at* LOWER COST

PRESCOTT

Sawmill Machinery

HIGHER PRODUCTION per man hour is one of the chief advantages of installing Prescott sawmill machinery. You can cut more lines per minute with less waste and you'll get maximum quantity and grade from every log. Downtime is practically eliminated.

LOWER COSTS and a bigger, faster return per dollar of investment are the net result. Profits go up because slow, costly, old-fashioned methods can be discarded immediately.

WITH PRESCOTT sawmill machinery, you can meet today's demands for greater production, lower overhead, and maximum dependability in every phase of sawmill operation. Let us show you how.

CALL, WIRE OR WRITE for complete information, detailed technical data, illustrated literature or the services of a trained sawmill engineer. No obligation, of course.

For Profitable Sawmill Operation... **SPECIFY**

PRESCOTT

HIGH EFFICIENCY, HEAVY-DUTY SAWMILL MACHINERY

THE PRESCOTT COMPANY, *Menominee, Mich.*

THE CASE OF THE
TOOL THAT BUILDS EXTRA WORKING HOURS
THAT WAS A BIG REPAIR JOB, ART. DON'T SEE HOW YOU DID IT SO FAST.
C'MON IN THE SHOP A MINUTE...
WE'RE SET UP WITH DIFFERENT WORK AREAS, AND WITH SPECIAL TOOLS AND EQUIPMENT FOR DIFFERENT JOBS.
IT'S A NEAT LAYOUT, ALL RIGHT!
IN OUR SHOP WE CAN RESTORE ORIGINAL FACTORY SPECIFICATIONS IN USED ASSEMBLIES--AND DO IT FAST. NOW ON YOUR FINAL DRIVE JOB...
...WE USED THIS SPECIAL BORING BAR FIXTURE. IT'S WITHIN 10,000™S FOR TRUE BORE ALIGNMENT ON ANY CAT-BUILT TRACTOR. OTHER SHOPS MUST SEND OUT AND HAVE AN ALIGNING FIXTURE MADE FOR EACH JOB, AND JIG BORING IS COSTLY.
IT'S ONLY ONE OF OUR SPECIAL TOOLS THAT SAVE YOU TIME AND MONEY.
IT SURE TAKES THE RIGHT TOOLS TO DO THE JOB RIGHT!
CATERPILLAR*
*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.
CAT CARE FOR LONGER WEAR
LET ME HELP KEEP YOUR CAT* EQUIPMENT ON THE JOB!
Caterpillar Tractor Co., San Francisco, Calif.; Peoria, Ill., U.S.A.

Signode M2A Automatic Power Strapping Machine designed for hardwood flooring . . . now available for a variety of lumber bundles.

NOW! Automatic bundling . . . with SIGNODE'S New Power Strapping Machine!

It's here! Signode's new M2A *Fully Automatic* Power Strapping Machine—the last word in fast, economical bundling!

The strap chute of the specialized model shown here is designed for bundling 25/32" flooring in standard stacks 3 or 4 boards wide and 4 boards high. Modifications for other stacking patterns are available. The machine is capable of making 800 ties per hour . . . as much as 60M bd. ft. per 8-hour day!

FASTER BUNDLING CUTS COST

Signode's new M2A power strapping machine does its job safer as well as faster, with uniform tension on every strap. And faster bundling helps speed up all other handling operations—stacking, tallying, and loading.

If your plant bundles flooring, KD millwork, crating lumber, trim, and other lumber products on production line scale, it will pay you to get the facts about the new, faster bundling M2A. Write:

SIGNODE STEEL STRAPPING CO.

2616 N. Western Avenue, Chicago 47, Illinois

Pittsburg, Calif., Loveridge Road; Eugene, 1955 Todd; Portland, Ore., 1519 N.W. Irving St.; Seattle, 2 Hanford St.; Spokane, 417 Paulson Bldg.; Olympia, 1024 Eskridge Blvd.; Canadian Steel Strapping Co., Ltd., Vancouver, B. C.

VOLUME 84 • NUMBER 7

June 14, 1957

EDGAR P. HOENER
Publisher and General Manager

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

OFFICERS
WM. B. FREEMAN ..... President
LAWRENCE K. SMITH ..... Vice-President
EDGAR P. HOENER ..... Vice-President
MILLER FREEMAN JR. ..... Secretary-Treasurer

EDITORIAL STAFF
W. E. CROSBY ..... Editorial Director
ALBERT ARNST ..... Editor
LOUIS H. BLACKERBY ..... Associate Editor
WARD C. WILLIAMS ..... Associate Editor
STANLEY M. JEPSEN ..... Associate Editor
HAROLD H. KEIL ..... Associate Editor
CHARLES L. SHAW ..... Canadian Editor
LEE R. FLATBERG ..... News Editor

BUSINESS STAFF
JAMES C. WALLACE ..... Sales Manager
J. B. OLSON Special Services Sales Manager
JOHN LAUGHLIN ..... Production Manager
CHARLES C. BAAKE ..... Circulation Manager

PUBLISHING OFFICES
519 Southwest Park Avenue
PORTLAND 5, OREGON
Telephone CApitol 2-1314

ADVERTISING OFFICES
PORTLAND 5, OREGON
519 S. W. Park Avenue
CApitol 2-1314—Charles W. Cowman, J. B. Olson
SEATTLE 4, WASHINGTON
71 Columbia Street
MAin 1626—James C. Wallace, Leigh M. Freeman
SAN FRANCISCO 5, CALIFORNIA
500 Howard Street
EXbrook 7-1881—Stuart F. Leete, W. H. Pearson
VANCOUVER 3, B. C.
402 Pender Street, West
MArine 7287—C. L. Shaw
LOS ANGELES 65, CALIFORNIA
3501 Eagle Rock Boulevard
CLinton 5-7194—Raul Rodriguez
NEW YORK 17, NEW YORK
370 Lexington Avenue
Murray Hill 3-9294—E. F. Clancy
CHICAGO 26, ILLINOIS
1791 Howard Street
ROgers Park 4-3420—E. T. Wang
R. F. Hanrahan
CLEVELAND 3, OHIO
4500 Euclid Avenue
EXpress 1-4180—Kenneth A. Kruse

PUBLISHED every fourth Friday by MILLER FREEMAN PUBLICATIONS, 519 S. W. Park Avenue, Portland 5, Oregon. Entered as second-class matter at the Post Office at Portland, Oregon, under Act of March 4, 1879.

ABP READERSHIP RESEARCH ABC

SUBSCRIPTION RATES—U. S., Canada, Mexico and other Pan American Union members—one year $4.00; two years $6.00; three years $8.00. Other countries—one year $5.00; two years $8.00; three years $11.00; Single copy 50 cents except Annual Plywood Review number $1.00.

CHANGE OF ADDRESS—Send subscription orders and changes of address to Subscription Department, THE LUMBERMAN, 500 Howard Street, San Francisco 5, California. Include both old and new addresses and zone number.

ADVERTISING—Complete plates only should be sent to: THE LUMBERMAN, 235 N. W. Park Ave., Portland, Oregon. Advertising copy and cuts, insertion orders and all instructions should be sent to the publishing office: 519 S. W. Park Ave., Portland 5, Oregon.

COPYRIGHT, 1957, by Miller Freeman Publications, Incorporated. Contents may not be reproduced without permission.

POSTMASTER: Please send Notice 3579 to THE LUMBERMAN, 500 Howard St., San Francisco 5, California.

A MILLER FREEMAN PUBLICATION

Features

How Do You Measure Up as a Supervisor? by Robley D. Stevens ... 35

Mill Revamps Dry Sorting and Lumber Stacking Systems ... 36
Angelina County Lumber Company, Kelty, Texas builds new facilities which utilize mechanical handling.

Barker Saves Manpower ... 40
Foote Lumber Company, Alexandria, Louisiana produces better lumber and tons of chips with aid of log barker.

My Responsibility as a Head Sawyer, by R. J. Smith ... 41

Inventory System Checks Species, Grades and Amounts ... 42
Fir Milling and Planing Company, Ashland, Oregon correlates office records with yard locations of lumber piles.

Six Men on Floor Cut 50,000 Board Feet Daily ... 44
Atlas Tie Company in Idaho produces mostly dimension stock.

Alder Logs Find Use in Plugging Newsprint Rolls ... 46

Flash Dryer Uses Gases to Dry Hog Fuel ... 47

How Two Gangsaws Can Increase Lumber Recovery, by Carl S. Sundbom ... 48

Sorter Reduces Lumber Handling ... 49

Mill Revamps for Gangsaw ... 50
Horse Creek Lumber Company adopts new lumber flow.

Arizona Firm Adds Second Planer for Surfacing Lumber ... 51

New Colorado Planing Mill Increases Production ... 51

Take Off Two Saws—Add Two ... 52

How to Saw Frozen Logs, by Albert Anderson ... 52

Mill Hits Road in Two Hours ... 53
Shaver Lake Forest Industries uses "Bachmobile" to produce lumber from smaller logs in the woods.

Dry Kiln Operators Review Progress in Seasoning, Point to New Techniques ... 54

Ozan Plans Three Gang Mills ... 58

Research Center Employs Glulam ... 58

Departments

Tall Timber ... 5
THE LUMBERMAN'S Lookout ... 7
Industry Trends ... 9
Late Forest Industries News ... 17, 18, 19 20
Safety Engineering ... 25
Plywood Department ... 61
Job Saving Ideas ... 64
Hardboard, Particleboard, Flakeboard ... 69
Log and Lumber Prices ... 92
Machinery & Equipment ... 108
Advertising Index ... 131

Industry Meetings

List of Industry Meetings ... 5
National Lumber Manufacturers Association ... 86

SHELL

A worth-while story about Shell men, Shell techniques and

SHELL ROTELLA OIL

Just what the doctor ordered...

for longer engine life

WATCH OUT for harmful acids that form during an engine's combustion cycle. Tests prove these acids can destroy an engine faster than friction.

The remedy? A "steady diet" of the oil that is *specifically designed to stop acid action*, SHELL ROTELLA OIL.

Shell Rotella fights this major cause of engine wear so effectively, it can add years to the life of gasoline and diesel engines, save you money on replacement costs.

This tough, heavy duty oil not only stops acid action, it has detergent-dispersant and oxidation-inhibiting properties that help keep engines *clean* as well.

Chances are Shell Rotella or another Shell product is the right answer to one of your lubrication problems. These fine products are developed by Shell Research – a 1500-man team strong on lubrication experience. Why not put that experience to work this week?

Our Cover Picture

LOGS HEAD for the sawmill at Angelina County Lumber Co., Kelty's, Texas, after being barked in a Nicholson 30 inch Roto-Barker, at the left. Deck is full of the round stuff. Diameters indicate the small size of logs upon which many mills in Southern pine region have to subsist. Logs can be dumped back into pond and returned from pond up the same log haul, shown in foreground. Deck feeding to barker also dumps into pond. See story on page 36.

Sawyer's Report . . .

THIS MONTH we also take you behind the scenes at Angelina County Lumber Company and give you a head sawyer's eye view of the milling operation. Read Mr. R. J. Smith's interesting report on page 40.

Industry Meetings

June

Maple Flooring Manufacturers Association, summer meeting, Hotel Northland, Green Bay, Wis., June 21.

Forest Products Research Society, annual national meeting, Exhibit, and Wood Industry and Suppliers, Hotel Statler, Buffalo, N. Y., June 23-28.

National Wooden Box Association annual summer meeting, Lake Placid Club, Essex County, N. Y., June 24-26.

July

Northwest Hardwood Association, quarterly meeting, Leopold Hotel, Bellingham, Wash., July 20.

Pacific Division, National Wooden Box Association, Fresno Hacienda Motel, Clinton, Calif., July 17-18.

Appalachian Hardwood Manufacturers, Inc., summer meeting, Homestead Hotel, Hot Springs, Va., July 22-23.

August

Society of Automotive Engineers, Seattle, Aug. 12-16. (Members of forest industries will be participating.)

September

Association of State Foresters, Longview, Wash., Sept. 11-13.

Western Pine Association, semi-annual meeting, Multnomah Hotel, Portland, Ore., Sept. 11-13.

Hoo-Hoo, 66th annual national convention, Dinkler-Plaza Hotel, Atlanta, Ga., Sept. 15-18.

Northern Sash and Door Jobbers Association, Minneapolis, Minn., Sept. 30-Oct. 2.

October

Pacific Logging Congress & Machinery Show, Seattle, Oct. 30-Nov. 1.

December

Western Forestry & Conservation Association, Olympic Hotel, Seattle, Wash., Dec. 10-13.

THE Lumberman

TIMBER PLYWOOD BOARD WOOD MANUFACTURING

Presents as Tall Timber

NILS B. HULT

NILS HULT, manager, Hult Lumber Company, Junction City, Oregon.

IN THE PAUL BUNYAN tradition both in physical and mental stature is giant Nils Hult, second generation Oregon lumberman, who at 40 is one of the West's outstanding lumbermen. He is manager of Hult Lumber Co., Junction City, Ore.

Like his father, big, good-humored Julius Hult, who started the first Hult sawmill at Horton, in Oregon's Clackamas County back in 1906, Nils Hult is one of the West's most progressive and aggressive lumbermen.

The crude, water power sawmill at Horton, seven miles back up in the brush from the nearest railroad, was the beginning of Nils Hult's sawmill experience. As a boy he rode timbers and ties down the flume from the primitive sawmill, and he watched with knowing eyes the business of converting logs into lumber.

When father Julius Hult moved operations to Lane County in 1925, Nils was old enough to take more than a small boy's interest in sawmilling. First at Vaughn and later at Lowell, he spent all spare time at the sawmill and in the logging woods.

Grudgingly, he took time out after high school to attend Central Washington College of Education at Ellensburg, but the call of the tall timber was too strong and, after a year, he went back home. By this time, the Hult Lumber Company operation at Lowell had been sold and in 1933 the beginnings of the substantial Hult enterprises at Horton, 30 miles west of Junction City, had been started.

NOW A FULL-GROWN MAN and ready to assume his share of responsibility in the Hult family business, Nils entered enthusiastically into sawmilling. His brother, Carroll, later killed in a logging operation, took over the woods end of the business, and Nils busied himself with production and merchandising.

The story is told that while at Ellensburg, Nils had a run-in with one of the less inspired professors on the campus. It seems the professor was noted for the dullness of his lectures and not a few students took advantage of the course to catch up on their lost sleep. On a particular day, the professor, absent-mindedly coming back to earth after a flight into the beyond, noticed that one student was sound asleep. Nils being next to the student was asked to awaken him. But, Nils is reported to have told the prof to wake him up himself, that he had put him to sleep. The prof took a dim view of such insubordination, and this accounts, so school legend has it, for Nils' sudden lack of interest in more formal education. Nils denies the charge, but not very vehemently.

Much of the vigor of the Hult Lumber Company growth and expansion has been credited to the drive and enthusiasm of Nils, tempered with the experience and judgment of the elder Julius. This combination of age and youth, experience and imagination has been eminently successful. It is a formula that has worked wonders at Horton.

In 1948, the Hults built a modern remanufacturing plant at Junction City at the junction of two railroad lines, later adding dry kilns. Prior to that, the mill at Horton had been converted from a circular to a bandsaw headrig and other labor-saving machines installed. In 1956, the company started operation of a green veneer plant at Horton, and in their search for more complete utilization, installed a small scrag sawmill at Horton to cut peeler cores and small logs into eight-foot studs.

MUCH OF THIS is the doing of energetic, far-sighted Nils Hult, who has said that, to stay in business today, a sawmill must do more than turn logs into lumber. Utilization and quality manufacture is a fetish with this tall fir lumberman. Slated for early building at Horton is a chipper plant which will convert all bark-free wood into high grade pulp chips.

Nothing is static at Hults. The drawing boards of competent engineers and architects always have some new improvement under way. Such is the nature of this remarkable young man who has grown in stature and authority within the industry.

The life of Nils Hult revolves around his industry. He has a world of energy which is not entirely expended upon his own business. He probably holds as many official titles

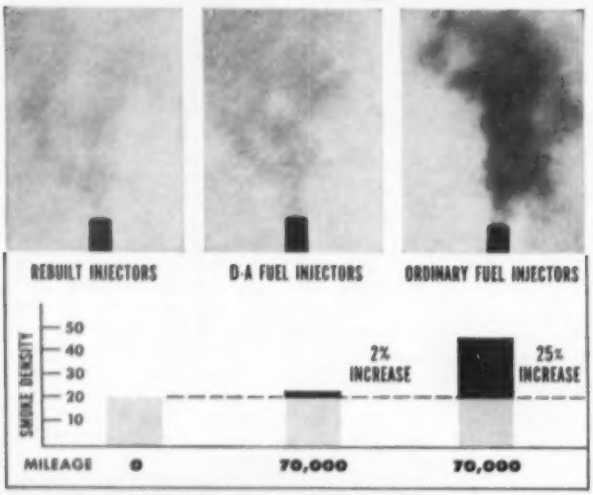
(Continued on page 30)

STANDARD ENGINEER'S FIELD REPORT

PRODUCT DIESEL FUELS

FIRM YOURS!

New Detergent-Action diesel fuels



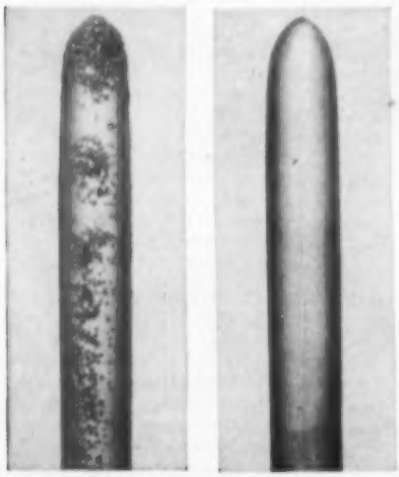
SMOKE DENSITY TEST: Starting with rebuilt injectors, Cummins-powered trucks were driven 70,000 miles. Note that trucks using Detergent-Action fuel show only 2% increase in smoke density after 70,000 miles—while those using ordinary fuel show 25% increase at same mileage.

- **Minimize exhaust smoke!**
- **Keep injectors clean!**
- **Lengthen injector life!**
- **End rust in fuel systems!**
- **Proved in 4 million miles of use!**
- **Exclusive... at no increase in price!**

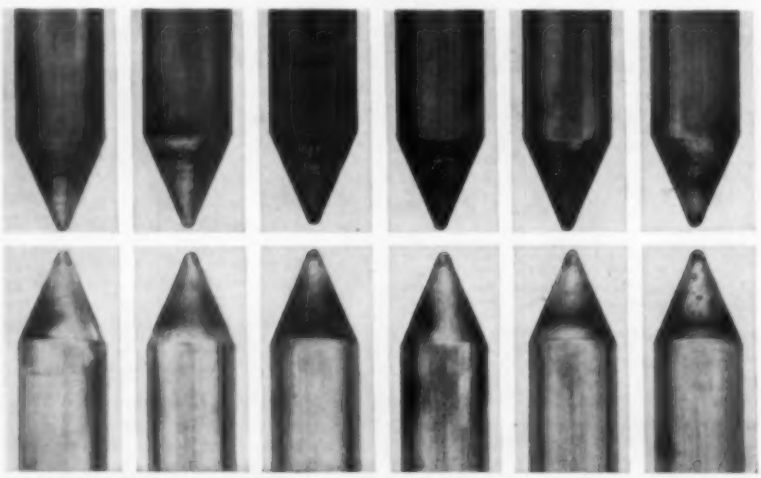
New Chevron Diesel and S. O. Automotive Diesel fuels with famous Detergent-Action prevent deposits from forming on the tips of diesel injectors... the basic cause of excessive exhaust smoke and short injector life.

In addition, you get anti-rust protection for the entire fuel system. Critical fuel parts can't rust or corrode because they are coated with a tough film that seals rust out.

Four million miles of heavy-duty truck operation proved the superiority of these new fuels. No other diesel fuel on the market offers you the advantages of Detergent-Action with anti-rust protection. And these important extras are yours at no increase in price!



ANTI-RUST TEST: Polished steel spindles were immersed in diesel fuel containing 8% sea water, and agitated at 140° F. After 20 hours, spindle in ordinary fuel (left), shows severe rust and corrosion damage; spindle in Detergent-Action fuel (right), shows no effects.



INJECTOR DEPOSIT TEST: Injector plungers of Cummins diesel engines were first cleaned, then subjected to 100 hours operation under high load. At end of test, plungers (top) using ordinary fuel were fouled with heavy smoke-causing deposits. Plungers (bottom) using Detergent-Action fuel remained clean and free of harmful deposits.

S.O. AUTOMOTIVE DIESEL FUEL

CHEVRON DIESEL FUEL

For More Information contact your Standard Engineer or representative, or write 225 Bush Street, San Francisco 20, California

TRADEMARKS REG. U.S. PAT. OFF

STANDARD OIL COMPANY OF CALIFORNIA

The LUMBERMAN'S LOOKOUT

WHAT'S AHEAD IN BUSINESS for balance of 1957 is anybody's guess. Here are some predictions based on various reports:

- Physical volume of business in 1957 will be at least the second best on record and may equal the all-time high of 1956.
- A further rise in interest rates, increased competition at the retail level and a stepped up merger rate.
- Generally good times to continue for next 10 years, but union demands for higher wages and shorter working hours could set off a recession earlier. A downturn in new credit obligations would be one indicator of a possible recession.
- Prospects bright for more wood schools, a continuation of the trend to suburban living and more growth in do-it-yourself activities.
- An eventual business downturn, for which the lumber industry should prepare itself.

LOOK AHEAD FOR LUMBER AND PLYWOOD INDUSTRY in 1957 shows little promise for any radical upsurge in orders or upward shift in prices. While some regions and some species show firming and even an increase in orders, general opinion of most industry men is that present status quo will be maintained. West coast industry is engaged in labor negotiations, which puts damper on long range planning or any increased activity in log buying or accelerated production. Price structure has shown little change except downward, for most items, which means lower rate of profit—or losses—for many operators.

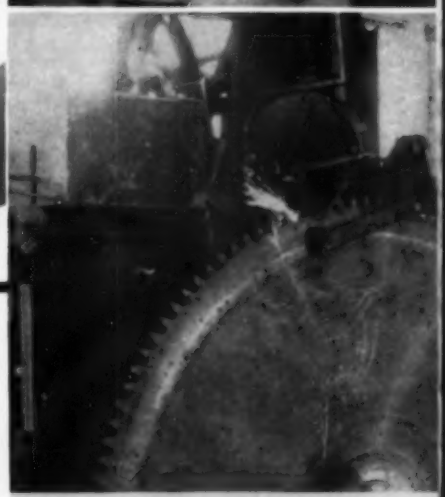
EXPECT RENEWED INTEREST IN RED CHINA trade, as International Longshoreman's and Warehousemen's Union seeks Congressional support for ending embargo on trading with China. Union has unlisted support from many companies and associations, plans aggressive action to reopen trade channels. To Pacific Coast, this export business during present decline in domestic demand for lumber would be life-saving stimulus.

BATTLE OF BOARD SIZES ISN'T OVER yet predict some industry men, even though American Lumber Standards Committee in May declined to make changes tying sizes to moisture content. Long range trend in building materials will be toward uniform sizes. Lumber to meet growing competition with other standard sized materials, some also made of wood, probably will have to "fall in line." Pressure will come from FHA, specifiers and consumer groups, including retail lumber dealers. Expect "boycott" action from some of these groups on a regional basis to begin with. Most affected by changes in lumber standards will be construction lumber in one and two inch thicknesses, some of which is manufactured and shipped green.

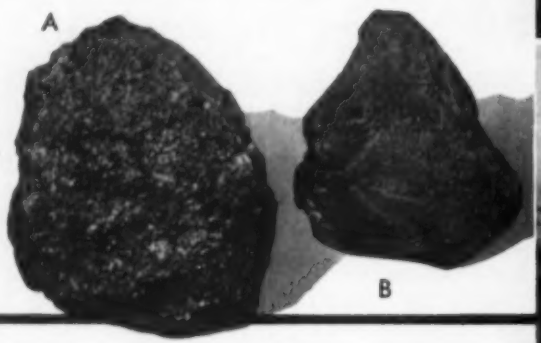
COST-CONSCIOUS PLYWOOD INDUSTRY will give more attention to balancing orders with log quality, possible use of steaming blocks to improve veneer quality, slower chipping to improve grade, more use of mechanical handling allowance at drum sander, more adoption of electrical hydraulic and air operated controls in the industry and improved techniques in use of low grade materials through use of better patching methods and overlays.

NEW 44 ALUNDUM* abrasive

...most outstanding non-premium abrasive ever developed...with new "TOUCH of GOLD" benefits for saw gumming



Different In Every Way! New 44 ALUNDUM abrasive (B at right) *looks different* from ordinary aluminum oxide abrasive (A), with a finer grained surface that denotes greater density and toughness. That's because it's *made differently*, by a special Norton-developed electric furnace process. That's why it *performs differently*, with new time-and-money-saving "Touch of Gold" advantages.



The big news about the new 44 ALUNDUM abrasive is this:

For a non-premium priced aluminum oxide abrasive, its performance and service life are truly outstanding.

This has been proved in more than 1100 tests, made in plants all over the country. Saw mills, in particular, report that new 44 ALUNDUM wheels have these advantages over other non-premium priced aluminum oxide wheels: *Faster rate of cut . . . cooler cutting . . . hold form better . . . longer life.*

STRAIGHT FACTS

New 44 ALUNDUM abrasive is not a cure-all. For example, nothing can replace 32 ALUNDUM abrasive for many saw sharpening jobs.

But — on any job where non-premium priced aluminum oxide wheels are good, the new "44" wheels will give results ranging from at least equal to very much better. And in saw gumming, you can count on them to hold form excellently, to protect against heat damage — while helping to cut your sharpening time and costs to a new low.

Take advantage of this outstanding new abrasive value. See your Norton Distributor for prompt delivery of new 44 ALUNDUM wheels — available in the vitrified G Bond or the B11 resinoid bond.

NORTON COMPANY, Worcester 6, Mass.

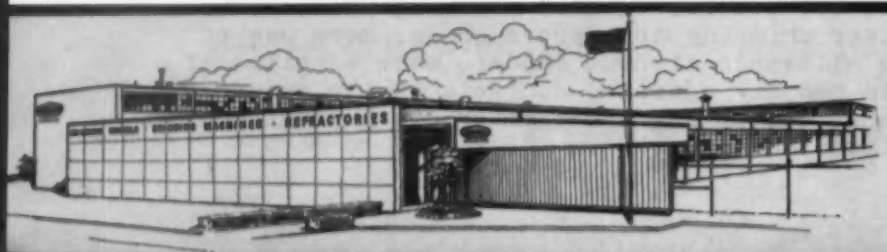
W-1747

NORTON
ABRASIVES

Making better products... to make your products better

NORTON PRODUCTS: Abrasives • Grinding Wheels • Grinding Machines • Refractories

BEHR-MANNING PRODUCTS: Coated Abrasives Sharpening Stones • Behr-cat Tapes



Norton distributors on the West Coast are supplied with 44 ALUNDUM wheels, as well as other wheels, from the new Norton plant at Santa Clara, Calif., the world's most modern grinding wheel plant.

*Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries

INDUSTRY TRENDS

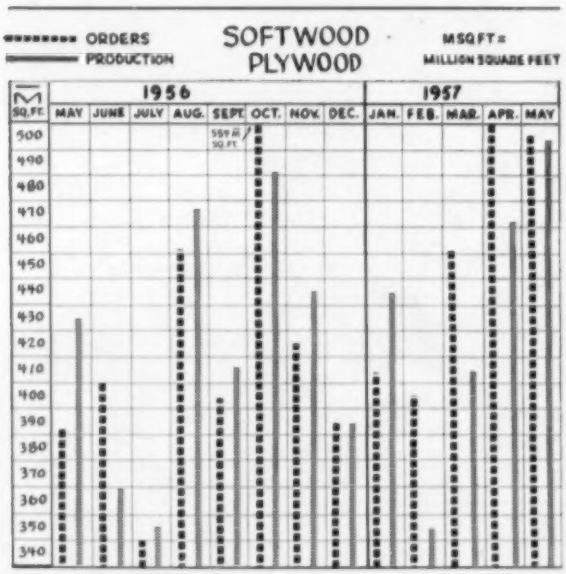
CARLOADINGS of forest products from the Pacific Northwest continue behind the pace of recent years, are the lowest since 1952. However, the trend in April was up, though the total lagged behind a year ago. Forest products carloadings are running about 11% behind a year ago.

PRESERVATIVE TREATED WOOD volume in 1956 was 2.5% ahead of 1955, totaling 254.6 million cubic feet. Use of pentachlorophenol increased 25%, creosote 1%. Increased preservative use occurred in poles, piling and switchties. Fewer crossties and fence posts were treated.

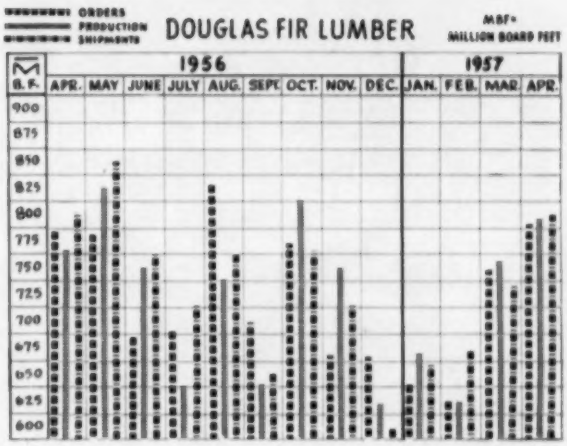
WATERBORNE MOVEMENT of lumber from the west coast of North America picked up in April. While both export and domestic shipments gained, the biggest increase was noted in domestic movement from the west coast of the United States. B. C.'s export total improved.

BOX SHIPMENTS in the first quarter are 4.15% behind the same period of 1956. Eastern plant shipments are down 7.53%, western plants 2%. The Inland Empire in the West continues very active with shipments up 24% from a year ago.

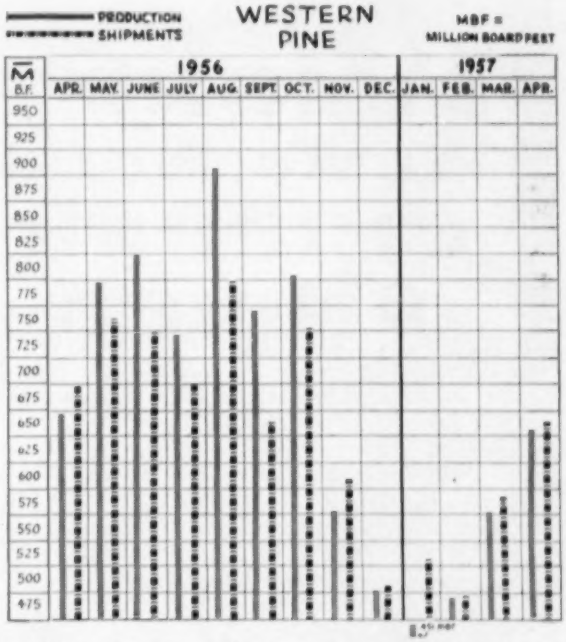
FISCAL REPORTS from industry members show profits in recent months down, often when sales are up. Several firms report record sales and production, yet declining profit. Increased profit at one major industry member reflected a recent acquisition. The pattern represents firms in lumber, plywood and pulp products.


ORDERS
PRODUCTION
SOFTWOOD PLYWOOD
MSQ.FT = MILLION SQUARE FEET
M SQ.FT.
1956
1957
MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR. MAY
500 490 480 470 460 450 440 430 420 410 400 390 380 370 360 350 340

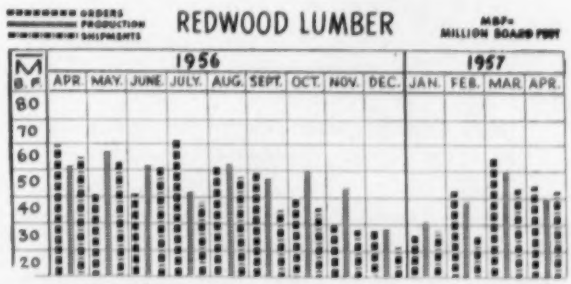
DOUGLAS FIR PLYWOOD production at the end of 21 weeks totals 2.15 billion square feet, down 1.4% from a year ago. The weekly production average is 102.4 million square feet compared to 103.9 million a year ago. Unfilled orders are at 368.8 billion square feet.


ORDERS
PRODUCTION
SHIPMENTS
DOUGLAS FIR LUMBER
MBF = MILLION BOARD FEET
M B.F.
1956
1957
APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR.
900 875 850 825 800 775 750 725 700 675 650 625 600

DOUGLAS FIR region production at the end of April totals 2.99 billion feet, compared to 3.09 billion at the same time a year ago. Orders to date are 2.87 billion feet. Unfilled orders at the end of April totaled 628.6 million feet; gross stocks are 1.2 billion feet.


PRODUCTION
SHIPMENTS
WESTERN PINE
MBF = MILLION BOARD FEET
M B.F.
1956
1957
APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR. APR.
950 925 900 875 850 825 800 775 750 725 700 675 650 625 600 575 550 525 500 475

WESTERN PINE region production at the end of April totals 2.15 billion feet, compared to 2.3 billion feet a year ago. Shipments total 678 million feet, compared to 690 million feet a year ago. Gross stocks on April 30 were 1.98 billion feet.



REDWOOD PRODUCTION at the end of April totals 184.7 million feet, compared to 218.4 million feet a year ago. Shipments total 165.6 million feet, compared to 196.1 million a year ago. Orders received total 171.6 million feet, compared to 220.7 million feet a year ago.

Q. How can I Make More Profit in Waste Wood Chipping?

A. Get Better Chips — Cut Right with

SIMONDS Waste Wood CHIPPER KNIVES

If you're in the business of providing wood chips to pulp mills . . . and chipping "cat face" pine is one of your problems, SIMONDS WASTE WOOD CHIPPER KNIVES will make more money for you.

Why? Simply because they're rugged and extra tough . . . hold a sharp edge longer . . . step up *uniform* chip production and keep waste in dust and bruised chips at rock bottom. Engineered and made especially for waste wood chipping, Simonds Knives are growing favorites everywhere. You too can bank the extra profit they will help *you* make!

SIMONDS MAKES ALL TYPES OF MACHINE KNIVES
PLANER • HOG • CHIPPER • VENEER • SHAPER STEEL

125 YEARS OF GROWTH • 1832-1957

SIMONDS
SAW AND STEEL CO.
FITCHBURG, MASS.

Factory Branches in Boston, Chicago, San Francisco and Portland, Oregon • Canadian Factory in Montreal, Que.
Simonds Divisions: Simonds Steel Mill, Lockport, N. Y.
Simonds Abrasive Co., Phila., Pa., and Arvida, Que., Canada
Heller Tool Co., Newcomerstown, Ohio

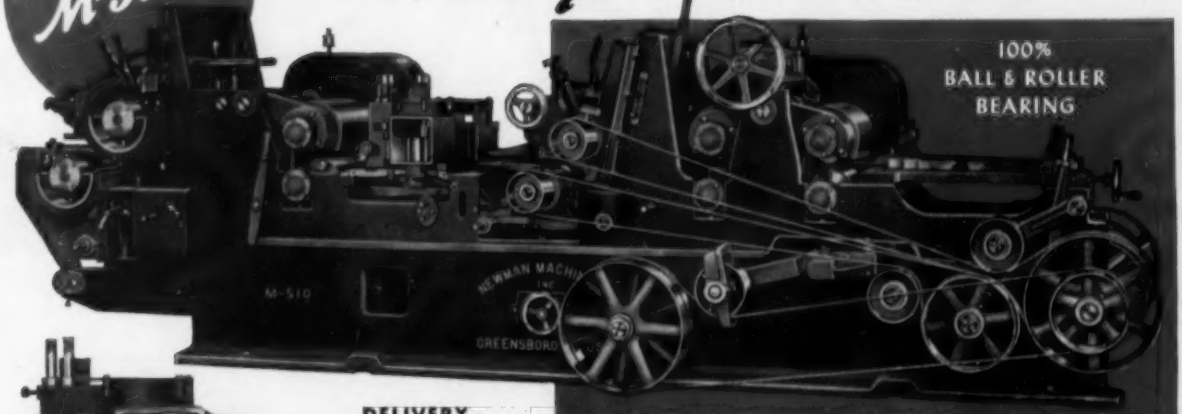
Other High Quality SIMONDS Products It Will Pay You to Use

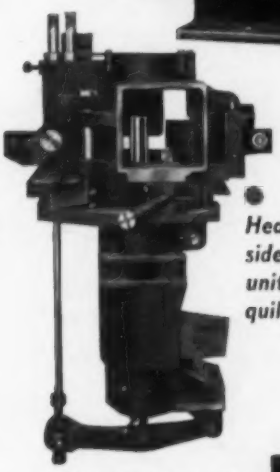
For Fast Service from Complete Stocks
Call your
SIMONDS Industrial Supply DISTRIBUTOR

A New 10" Roll PLANER & MATCHER with feeds to 250 feet per minute

Newman M-510

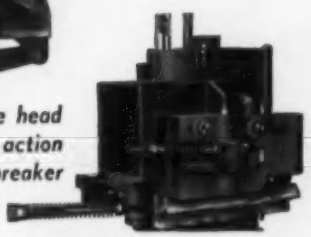
A medium priced machine with every desirable feature



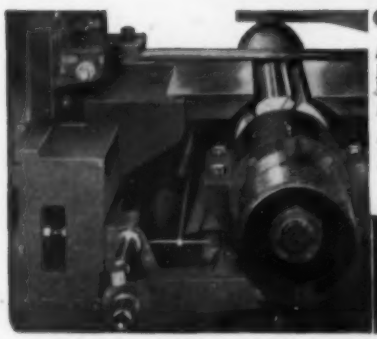


DELIVERY FROM STOCK IF YOU HURRY

- *Heavy duty side head units of long quill design*



- *Left side head double action chipbreaker*



- *Massive vibration free bed plate after bottom cylinder*

- Simultaneous roll raising device for front bottom feed rolls
- Quick release for pressure bar
- Quick release for left side head
- All Sprockets steel—heat treated
- Flame hardened bottom bed plates and pressure bar
- Feed works reversible
- Wear resistant rigid solid steel long guide
- Chatter proof jointer units
- Roller knife setting gauge available

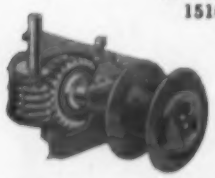
Newman Machine Co., Inc.
GREENSBORO, NORTH CAROLINA, U. S. A.

A CRANE COMBINATION for any PULP YARD PROBLEM!

WHAT is the crane combination you need? Northwest Cranes bring you every advantage for efficient handling in your pulp yard. There is a wide range of boom hoist equipment. Mast-type gantry with the sectional boom hoist rigging and pendent lines make possible ease of adjustment to boom length changes. You have a choice of two or three sheaves at the boom point. Adjustable jib, telescopic boom struts, removable counterweight—all can be had to meet your requirements. And, if you need long crawlers and wide treads, they're available.

Northwests will work from the car or travel from car to car, unloading as they go. The "Feather-Touch" Clutch Control gives the *feel of the load* without resorting to delicate mechanisms that often call for special knowledge for adjustment. If you are planning to modernize your pulp yard find out what Northwest Crawler equipment can do for you. Many well-known mills are using Northwests and a Northwest Man can give you complete details.

NORTHWEST ENGINEERING COMPANY
1510 Field Building, 135 South LaSalle St., Chicago 3, Ill.

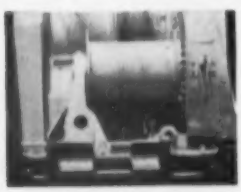


Standard Boom Hoist

The Northwest Standard Boom Hoist is a self-locking worm gear boom hoist running in an oil bath and it operates under power both up and down. It is safe, smooth, positive!

Independent High-Speed Boom Hoist

The Northwest Independent High-Speed Boom Hoist is independent of all other operations and permits booming with power controlled lowering without sacrificing either of the main drums. It is a rugged, heavy-duty unit capable of hour in and hour out operation. There is no finer, more reliable hoisting assembly.



Third Drum

The Northwest 3rd Drum operates independently of the main drums and is fitted with its own clutch and brake. It makes possible 3 load lines with a standard worm boom hoist; and 3 load lines with the independent high-speed boom hoist.

NORTHWEST

CRAWLER and TRUCK MOUNTED SHOVELS • CRANES • DRAGLINES • PULLSHOVELS

THE GREATEST COMBINATION OF PROVED ADVANTAGES EVER BUILT INTO A SHOVEL, CRANE, DRAGLINE OR PULLSHOVEL

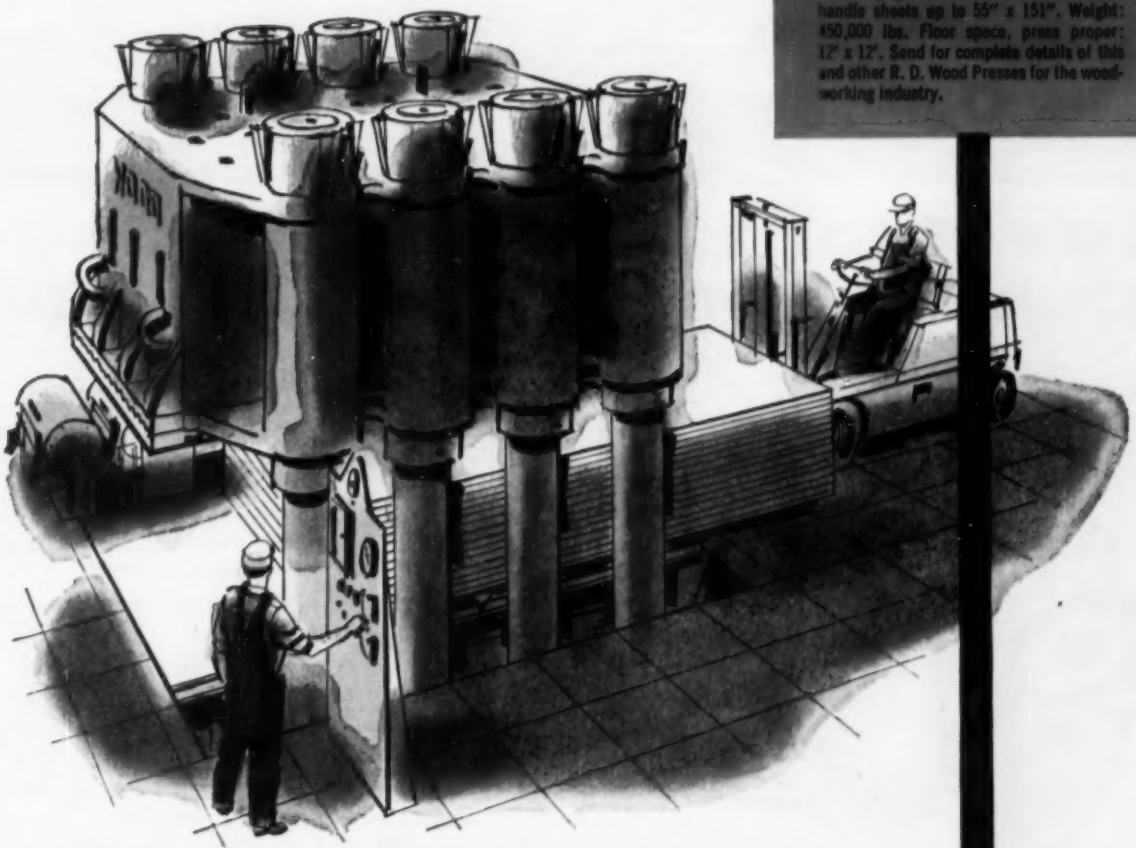
C41-6-LG

Engineered for Performance

Put a Wood Press to work and get the money-saving advantages of smooth, dependable performance . . . long operation with low maintenance.

Reason: every Wood Press is the product of sound design, carefully selected materials, conscientious craftsmanship. This is why Wood Presses are known throughout industry for their trouble-free operation and fast, economical production. R. D. Wood has many standard press designs for producing hardboard, composition building boards, veneer, plywood and pressed wood—and engineers others for special jobs. Write for our catalog and engineering information. No obligation, of course.

R. D. Wood Combination Press for asbestos flat board and corrugated asbestos board. Operation of this fast working, high production machine may be manual, semi-automatic or fully automatic. Entire unit is self-contained with motor-driven pumping system, valves and controls. Capacity: 6400 tons. Daylight: 3'-10". Stroke: 3'-10". Can handle sheets up to 55" x 151". Weight: 450,000 lbs. Floor space, press proper: 12' x 12'. Send for complete details of this and other R. D. Wood Presses for the wood-working industry.



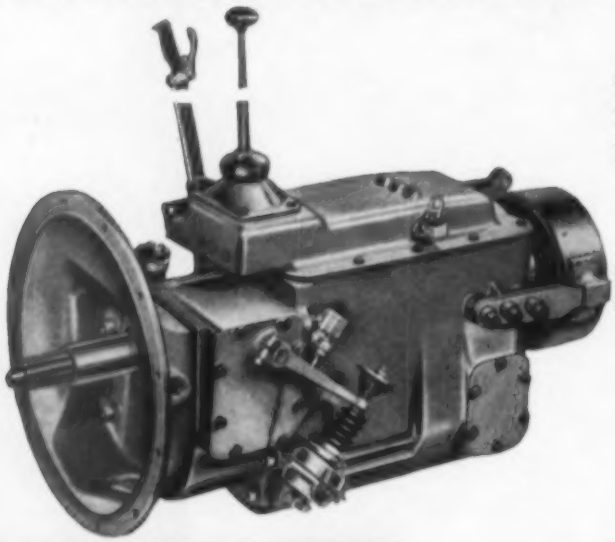
R. D. WOOD COMPANY

PUBLIC LEDGER BUILDING • PHILADELPHIA 5, PENNSYLVANIA

Representatives in Principal Cities

MAKERS OF HYDRAULIC PRESSES AND VALVES • FIRE HYDRANTS • CAST-IRON PIPE • GATE VALVES • GAS PRODUCERS • ACCUMULATORS

Ideal for Highway Hauling-
CLARK stepMatic Transmission



Here's happy and profitable news for all operators whose truck equipment takes punishment—Clark's stepMatic Transmission. This transmission has proved particularly ideal for long-haul, high-speed operations.

- Ten speeds—splitting ratios in between the normal 5-speed transmission ratios—giving 28% steps to fit every hauling need.

Transmission gears synchronized. Semi-automatic shift for the splitting ratios

- Full control of gear-shifting at all times.
- Spares engine—the right ratio for every grade prevents engine lugging—decreases hauling time and fuel consumption.
- Increases transmission life—reduces shock loads. Less downtime for repairs.

By all means write for full information on this highway-proved achievement of Clark engineering.

CLARK® EQUIPMENT

TRANSMISSION DIVISION

CLARK EQUIPMENT COMPANY

Falahee Road • Jackson 8, Michigan

NEW at IRVINGTON

NEW END-SURFACERS, TRIMMERS | **NEW** END PRINTER | **NEW** TALLY MACHINE

Each Unit on This Page Designed to Reduce Production Costs and Increase the Sale and Re-Ordering of Your Lumber. The Tally Machine Fills Orders and Provides On-The-Spot Inventory Check!

IRVINGTON 88 V-BELT AUTOMATIC RANDOM LENGTH END-SURFACER

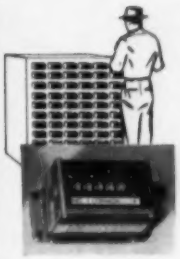
✻ Exclusive! AccurArc Saw Ladder Pivot—saw ladders pivot on totally enclosed roller bearings—no gear-type pivot to collect sawdust and become inaccurate—no contact with drive shaft! Your assurance of *accurate* saw alignment and *Smooth End Surfacing!*

- New concept in overhead frame design with 18-inch rigid steel tube.
- New spring-cushioned hydraulic shock absorbers let wheels flow *smoothly* over valuable lumber.
- Special feature eliminates slack in V-belts.
- Light, strong, aluminum alloy saw ladders.
- Individual Saw Control for selective cutting optional.
- (Patent Pending)

Field Tested and Proven in Operation During the Past Three Years! Installations at Holmes Eureka Lbr. Co., Simpson Redwood (2 units).

Are you looking for just a trimmer—or an End-Surfacer? Get the *best*—see Irvington *FIRST!* Write for complete details TODAY!

Also Available as the Irvington 88MA—Completely Motorized, Automatic, Air-Lift End-Surfacer.



IRVINGTON 101 TALLY MACHINE

- For accurate accounting of planing mill production.
- Can be used for automatic gauging of lengths.
- Series of meters, each registering one length and grade combination.
- Accurately determines lengths, grades, and quantities for specific orders.
- Optical counter can be pre-set to pre-determine quantities.
- Keeps accurate count of individual pieces in all sizes and grades. • (Patent Pending)

SEND details of your tally requirements and we will furnish our recommendations!

IRVINGTON 61 END PRINTER

- New type, self-sealing ink applicator.

- Positive ink flow control.
- Uses less ink in operation.
- New, improved housing design keeps out dirt, sawdust.
- Available with or without Waxer.
- Easier, faster adjustment and maintenance.

WRITE for complete details on the Irvington 61 End Printer!

IRVINGTON 26M Automatic and Semi-Automatic OVERCUTTING CUT-OFF SAW

- Cuts manufacturing costs by replacing swing saw and other expensive ways of cutting defects.
- Totally enclosed, Timken roller bearing pivot assures long-life accuracy.
- 84 cuts per minute—easy adjustment for width of cut.
- 5 and 7½ H.P. motorized saw arbors—completely electric drive—fast, smooth cutting.

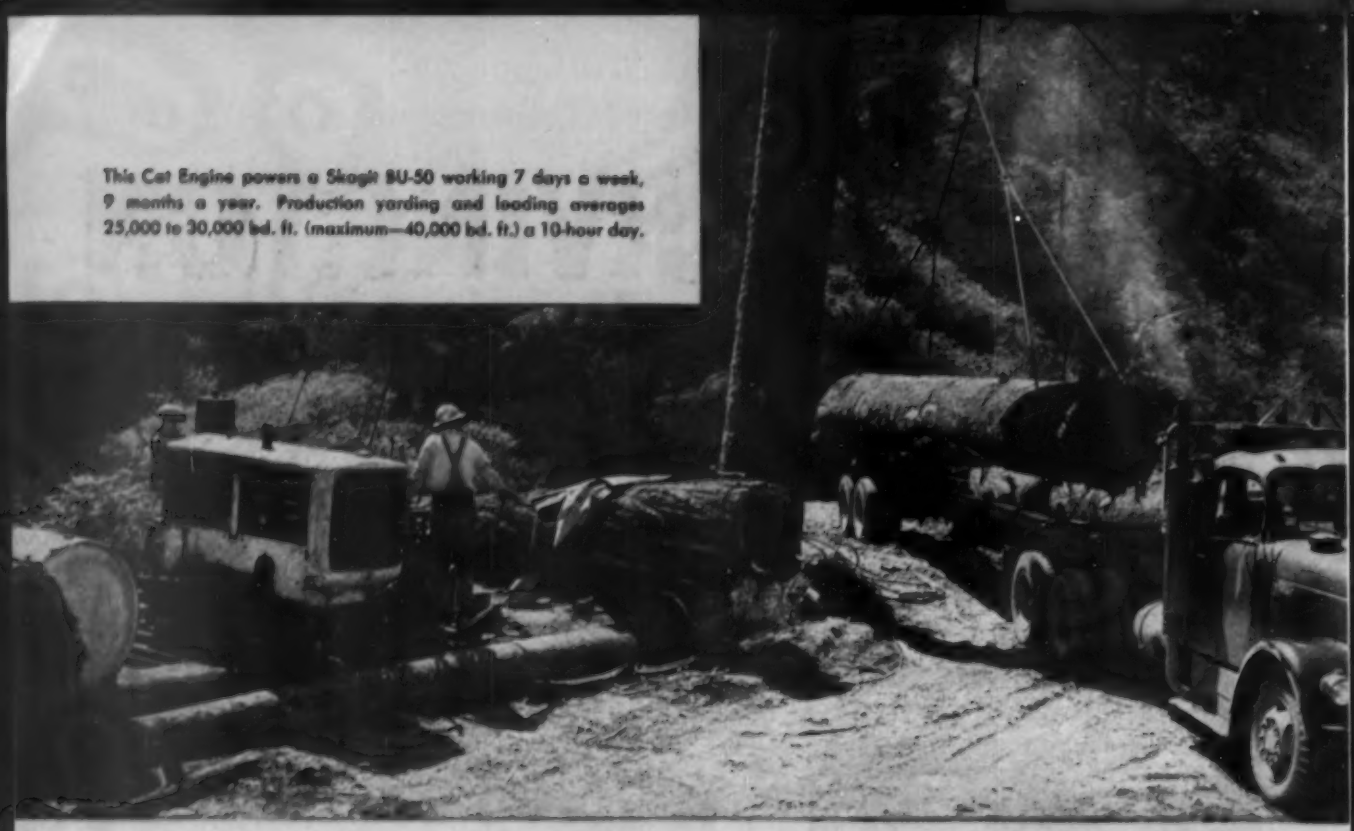
The 26MD Dual Saw Package includes right and left hand saws, roller work table, stop gauges, separate waste conveyor and board return belt assemblies, and platform for operator—in one integrated unit.

This is Only the Beginning of Many New Advancements Being Developed at Irvington!

Check with IRVINGTON First for the latest in labor-saving money-saving features

Irvington MACHINE WORKS *Since 1907*

1808 N. E. 7th Ave., Portland 12, Oregon • 3 Colfax N. E., Grand Rapids 5, Michigan



This Cat Engine powers a Skagit BU-50 working 7 days a week, 9 months a year. Production yarding and loading averages 25,000 to 30,000 bd. ft. (maximum—40,000 bd. ft.) a 10-hour day.

CAT* POWER HELPS CHARLES E. STUART EARN HIS "BREAD AND BUTTER"

South of Klamath, California, the G. and S. Logging Co. is working 280 acres of private land. The timber is about 90% redwood with some spruce. A Cat D318 Engine powers that outfit's Skagit BU-50, which yards logs about 500 feet and loads them on trucks. Operation averages 10 hours a day, 9 months a year. Production varies between 25,000 and 30,000 bd. ft a day, with a maximum of 40,000 bd. ft. Says Charles E. Stuart: "We feel that Cat power is the best you can get. It's economical to operate and very durable. Our D318's sustained power enables us to yard and load our biggest logs."

One of the smaller engines in the Cat power line is the D318 that delivers 119 HP. This compact 6-cylinder, 4-cycle, heavy-duty unit responds quickly to sudden snags with sustained power. Easy to operate, it requires *no* fuel system adjustments. There are *no* cylinder ports or air boxes to clean. As for economy, it burns low-cost fuel such as No. 2 furnace oil without fouling for 3-way savings—cheaper fuel, less of it and minimum maintenance. Like all rugged Caterpillar Diesels, it's built to do *more* work at *lower* cost for you!

Cat Engines range in size up to the 650 HP (maximum output capacity) D397. Whether you need power for a yarder, loader or sawmill, there's a modern heavy-duty Cat Diesel that's exactly right for you. Every engine is designed for long life—many are still working profitably after 50,000 hours. And you're backed 24 hours a day by prompt service from your Caterpillar Dealer. Ask him to show you how a Cat Diesel can step up your production and profits!

Caterpillar Tractor Co., San Francisco, Calif.; Peoria, Ill., U. S. A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

MODERN HEAVY-DUTY POWER

significant industry news

$2 MILLION OREGON EXPORT FIRM . . . Tony Fernandez, logging operator of Longview, Wash., has established a new firm in Portland, Ore., to export piling and poles to Japan. It will be known as Forest Timber Products of Oregon, is incorporated at $2 million. Fernandez is president; Jess Barker, Portland log buyer, is vice-president; and James Moore, Gresham timber executive, is secretary. The pole and piling supply will come mainly from British Columbia where Fernandez recently purchased 144,000 acres containing an estimated 1 billion feet of timber. The firm will also wholesale lumber and timber products and contemplates later installation of a sawmill and pulp plant.

U. S. PLYWOOD PLANS OREGON PLANT . . . A new plywood plant at Roseburg, Ore., in the planning stage for over a year, will be built by U. S. Plywood Corp. It will have a capacity of about 4.5 million square feet a month, will be located adjacent to the sawmill operation where a barker and chipper are being installed, to be in operation this fall.

LONGVIEW FIBRE EXECUTIVE PROMOTED . . . R. P. Wollenberg has been advanced to vice-president of operations at Longview Fibre Co., Longviaw, Wash. He succeeds the late R. S. Wertheimer as manager of the Longview plant and related company activities. He formerly was vice-president and manager of container operations. Also, P. M. Wertheimer, assistant mechanical superintendent and W. W. Clark, assistant mill manager, becomes directors of the firm.

TIMBER INDUSTRY PAY AGREEMENT . . . Two major members of the timber products industry . . . Georgia-Pacific Corporation, Portland, Ore., and Willamette Valley Lumber Co., Dalles, Ore. . . . with plants in Oregon, Washington and California, have ratified wage and other agreements with the Western Council of Lumber and Sawmill Workers and International Woodworkers of America. The agreement is subject to ratification by local union vote. Terms include: wage rate to be increased 5 cents an hour across the board effective June 1, provision for minor improvements in the vacation clause, provision for a wage opening October 1, 1957.

CALIFORNIA PULP MILL PLANS PROGRESS . . . Eureka, Calif., has formed a water district to provide water for production of a pulp and paper plant, has voted $12 million for the project. It now waits the division of Simpson Redwood Co. and Fibreboard Products Co. to go ahead with the joint pulp project. A site of 200 acres on Somoa peninsula has been secured and engineering has been completed. Lines to provide gas for the plant are also installed.

B. C. PLYWOOD PLANT CONSIDERED . . . A plywood plant at the sawmill at Princeton, B. C. recently completed by John Nylund of Grants Pass, Ore., is under consideration. Nylund and W. J. Korth who designed the sawmill, recently toured the Northwest securing plan data on plywood installations.

PULP MILL WORK DUE AT SITKA, ALASKA . . . Alaska Lumber & Pulp Co. expects to start work this summer on its $50 million logging and pulp mill project at Sitka, Alaska. Design will be Stevenson and Rubens under the supervision of the firm's chief engineer, Harold D. Cavin.

SALVAGE STUD MILL IN CALIFORNIA . . . The Pacific Lumber Co., Scotia, Calif., will place a new stud mill at Elk River in operation early in July. It will be a salvage operation under the direction of Ed Carpenter, resident manager.

BOISE CASCADE CORP. has been established through the merger of Boise Payette Lumber Co. and Cascade Lumber Co. Unification was carried out in order to make raw materials of both companies available for more intensive utilization. Company directors concluded that an economically feasible plan should be worked out to properly manage timberlands of each on a basis whereby wood wastes would be profitably used in by-product manufacturing facilities of adequate size. Considerable research will be carried out on possible uses for the wood residues. Merger of Potlatch Yards, Inc., into Boise Cascade Corp. now looms, is expected to be accomplished by July 1.

CONSTRUCTION ON A NEW VENEER PLANT at Carlton, Ore., for the Willamette Valley Lumber Co. has been started. It will be located adjacent to the former LHL Lumber Co. purchased by Willamette Valley, will cost an estimated $500,000.

A STUDY OF TIMBER PRICING METHODS in the Southwest region has been promised to the Southwest Pine Association by the U. S. Forest Service. The lumber group has complained that cost reductions and increased sales values developed through their efforts result only in higher timber prices changed by the forest service. Association members feel that unless the present policy is changed and some incentive offered, it is not likely that large expenditures for plant improvement will be made in the Southwest.

FOREST INDUSTRIES AND VENEER, LTD., a $9 million holding company, has been establishd to take over Peak Timbers, Ltd., and Veneered Plywoods South Africa Pty., Ltd. The two companies will operate as wholly owned subsidiaries. Peak Timber is mainly a U. K. company with some American financial holdings. It has 65,000 acres of forest lands in Swaziland and a particle board factory in that area.

LORENZ LUMBER CO. has shipped the first load of lumber from its new sawmill located north of Burney, Calif. Most of the mill's output of pine, fir and cedar lumber will go East by rail. The plant has a capacity of 80,000 feet a shift. The firm has indicated that the Burney location will in the future include other manufacturing facilities for forest products.

COLUMBIA WOOD PRODUCTS, a company incorporated in Oregon a year ago with the announced intention of establishing a particle board plant, has taken an option on the former McCormick Lumber Mill facilities in Sheridan, Ore. The firm, headed by Allen Coddington, president and George Crone, vice-president, has indicated it might be operating in six months.

CELOTEX CORPORATION has opened a new hardboard plant in London, England. The 3 million plant enables the firm to produce 11 types of hardboard from 1/10 to 5/16 inches. The boards, mostly for export, will be specially treated according to the part of the world in which they will be used. Celotex has doubled its hardboard production in England since the war.

NORTH ATLANTIC TRAMP FREIGHT RATES reached their lowest level in over two years toward the end of May and this enabled the British Columbia softwood lumber shippers to quote on the British market at a c.i.f. price of $117 per thousand feet for merchantable hemlock and some business was done below this price. This has led to a sharp increase in buying of Canadian lumber by the U. K. importers, for at these prices the lumber was cheaper than Scandinavian and Russian quotations.

INTERNATIONAL HARDWOODS, LTD., has been established within the Gliksten group to handle all hardwood production and sales in Ghana, West Africa, following the acquisition of the assets in Ghana of Mengel West Africa, Ltd., by J. Gliksten & Son, Ltd., London, England. The new company has a nominal capital of $700,000.

MOLALLA TIE CO., a new firm located at the former Molalla Forest Products plant in Molalla, Ore., has started production of ties, crossarms and heavy construction timbers. Owners are Fred Averill, G. G. Wells and Henning Klang.

ARNOLD BRANDIS retired June 1 from management of the timber division of the Longview Fiber Co., Longview, Wash.

FREDERICK F. WANGAARD, professor of lumber at Yale University, has been appointed a forestry advisor for the Philippines Forest Products Laboratory. The appointment was made by the Food and Agriculture Organization of the United Nations, is effective June 15 and extends for six months. Wangaard will later move on to Norway for search in wood working and technology under a Fulbright grant.

NEW PERSONNEL AT JEFFERSON PLYWOOD in Madras, Ore., include Jerry J. Hancock as plant manager and O. B. Williams as sales manager. The plant has reopened following a shutdown of six months.

JACK W. BREWER, Spokane, Wash., is new president of the Inland Empire Wooden Box Association, succeeding Leonard Erickson of Goldendale, Wash. George Wall, Chelan, Wash., is vice-president and L. T. Twitchell, Cashmere, Wash., is treasurer. V. V. Heilig continues as secretary-manger.

NEW REDWOOD REGION LOGGING CONFERENCE OFFICERS include George E. Stoodley, The Pacific Coast Co., Willits, Calif., president; William E. Baker, Holmes-Eureka Lumber Co., Eureka, Calif., vice-president. T. A. Carlson, The Pacific Lumber Co., Scotia, Calif., is the retiring president. Emanuel Fritz continues as secretary-manager, and Fred Landenberger as assistant secretary.

ALFRED W. STROM, manager of Tabor Creek Sawmills, was elected president of the Northern Interior Lumbermen's Association in British Columbia, succeeding T. H. Dilworth, Prince George Planning Mills. New vice-president of the group is R. W. Hilton, manager of Shelley Sawmills.

ROBERT B. WILLIAMSON, superintendent of the Pope & Talbot, Inc., wood preserving plant at St. Helens, Ore., for 27 years, has retired. He will be succeeded by William M. Pribyl who has been chief treating engineer.

BRITISH LUMBER ASSOCIATION LEADERS include Major Bruce B. Kennedy, Timber Development Association, and Cedric Ford, U. K. Building Board Manufacturers Association, both of whom were recently re-elected to chairmanships.

RICHARD DINGLE, Pullman, Wash., has been elected chairman of the Inland Empire Section, Society of American Foresters. Dale Arnold, Moscow, Ida., is vice-chairman; Grant Harris, Pullman, secretary-treasurer.

U. S. PLYWOOD CORP. has established its first Tree Farm in California, Weldwood Forest, a 70,000 acre unit.

EXECUTIVE CHANGES AT POPE & TALBOT . . . Two new vice-presidents have been elected at Pope & Talbot, Inc., and Joseph L. Paiva has retired as secretary, treasurer and controller. Adolphus Andrews, Jr., becomes a vice-president and a director to succeed Paiva on the board of directors. He will move his headquarters from San Francisco to the lumber division at Portland, Ore. John G. Baldwin, a director and general counsel, also becomes a vice-president.

MORGAN TO HEAD KIECKHEFER-EDDY . . . Howard W. Morgan, a vice-president and general manager of the pulp division of Weyerhaeuser Timber Co., has been named president of Weyerhaeuser's new Kieckhefer-Eddy division. Herbert M. Kieckhefer will be senior vice-president. Executive appointments in the division largely keep intact the management personnel of the former concerns.

PRESERVATIVE TREATED WOOD in 1956 increased 2.5% over a year ago, the U. S. Forest Service and the American Wood Preservers' Association report. Treated wood in 1956 totaled 254.6 million cubic feet, compared to 248.4 million feet in 1955. Creosote use increased 1%, pentachlorophenol use 25%. Increased preservative use occurred in poles, piling and switchties. Fewer crossties and fence posts were treated.

MARVIN W. FOILES, formerly with the Inland Empire Reseach center in Spokane, Wash., has been transferred to the Boise, Ida., research center of the U. S. Forest Service. He succeeds Alvin K. Wilson who has transferred to Ogden, Utah.

W. E. PARKISON, general superintendent of wood mill, finishing and services at the Crown Zellerbach Corporation paper mill at Camas, Wash., will become resident manager of the corporation's Carthage, N. Y., division on August 1. He will be succeeded at Camas by J. E. Lambert, now assistant in organizing and planning at C-Z's headquarters in San Francisco.

BROOKS SCANLON, INC., Bend, Ore., plans a modernization program which will place 10 acres under roof and will cost about $2.7 million. New equipment will run $700,000. The work will be started immediately, should be completed by January, 1958. Installation of barking and chipping equipment will probably be the first step. The modernization program is separate from the company's possible pulp mill planned in conjunction with Powell River Co., Ltd., Vancouver, B. C.

HAROLD W. ADAMS has been named secretary and counsel for Willamette Fibre & Chip Board, Inc., Sweet Home, Ore. He has been e legal advisor to the state department.

WALFRED J. MOISIO, for the past three years a staff officer in the Siuslaw National Forest in Oregon, has been promoted to staff officer in charge of mining claims in the regional forest service office in Portland, Ore.

ALEX H. LUNDBERG, has been named general manager of the up-state New York division of Stulman-Emrick Lumber Co., Inc., Brooklyn, N. Y. He will headquarter in Buffalo, N. Y.

SUPERIOR SPLICED VENEERS, INC., now operating a custom veneer plant in Portland, Ore., hopes to relocate in Milwaukie, Ore., where it awaits county approval before constructing a new plant.

RAYMOND U. HARMAN, assistant regional forester at Missoula, Mont., retires June 30, ending nearly 36 years of service with the U. S. Forest Service.

NEW D4 IS "FASTER AND EASIER RIDING"

EARL GALLOWAY, Earl Galloway Logging Co., Philomath, Oregon

SKIDDING

YARDING

LOADING

This heavy-duty CAT* D4 Tractor is the second owned by Earl Galloway Logging Co. Equipped with a No. 4S Bulldozer and Hyster winch, it does just about everything on the company's 1,240-acre relogging operation west of Corvallis. Production averages more than 100,000 bd. ft. of fir a month. Skidding, yarding, loading or building roads, the D4 works 10 hours a day, 6 days a week, 8 months a year. Earl Galloway's report on its performance reflects Caterpillar's policy of leadership in action—a policy that keeps rugged yellow machines first in the woods in money-making production.

"Our new D4 is faster and easier riding than our old D4," Earl Galloway says. "I prefer Caterpillar-built machines to any other kind or I wouldn't have bought it. Its maneuverability and power make it a hard rig to beat. It's ideal for our short logs and does a great job for us on ground that's as steep as any to be found."

One of the smaller crawler tractors in the Caterpillar line, the D4 is compact and maneuverable, but sturdy enough to handle man-sized jobs in the woods. From its specially hardened track shoes to its husky 63 HP (flywheel) Cat Diesel Engine, it is designed to outproduce any machine in its power range. It burns low-cost, non-premium fuel without fouling for economical operation. And maintenance requirements are minimum. For example, the exclusive Caterpillar fuel system requires no adjusting.

Get the complete facts about this little giant from your Caterpillar Dealer. He backs you with parts you can trust and round-the-clock service. Pick a tough job and ask him to show you how the D4 can handle it. Name the date—he'll be glad to demonstrate.

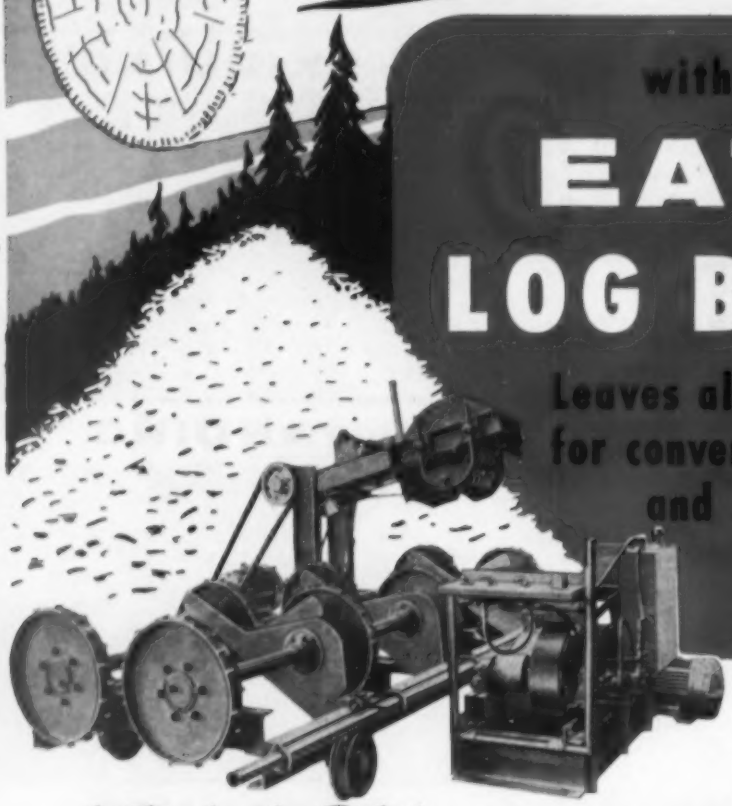
Caterpillar Tractor Co., San Francisco, Cal.; Peoria, Ill., U.S.A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

WANTED—
THE HARD WORK

TURN WOOD WASTE INTO PROFITABLE PULP CHIPS!



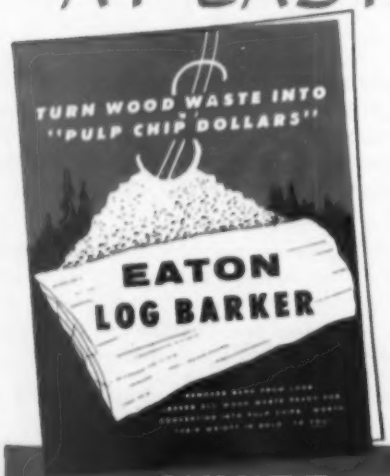
with the new

EATON LOG BARKER

Leaves all wood waste ready for converting into pulp chips and other bark-free products.

AT LAST!

A log barker you can afford to own and operate!



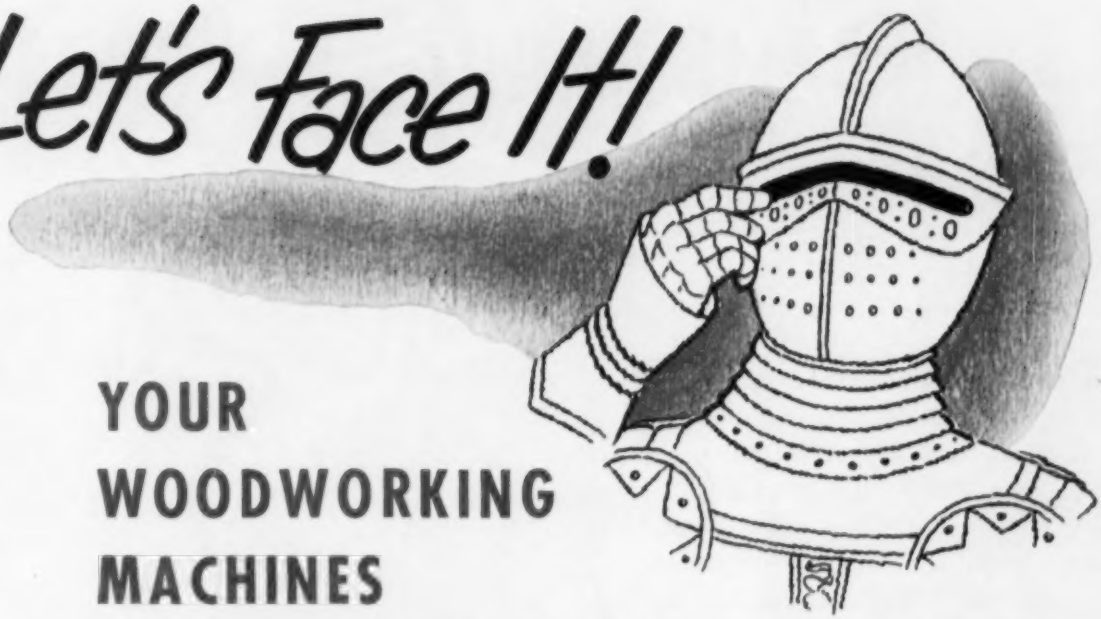
Designed particularly to meet the needs of the average sawmill operator, the Eaton log barker fulfills the long-felt need of a heavy duty machine that is low in installation, maintenance and operator cost. One man can operate it!

Handles logs from 5" dia. up to 4'. Chain-flail type head. Discharges bark-free logs automatically.

Write today for further details and your copy of this illustrated bulletin. We think it will be well worth your while!

WHITE RIVER MACHINE CO. INC.
ROCHESTER, VERMONT

Let's Face It!



YOUR WOODWORKING MACHINES DON'T HAVE TO LOOK ANCIENT TO BE OBSOLETE...

Don't be deceived by appearances. Even though your plant equipment may look like new, it may be slyly stealing money out of your pockets with inefficient, unprofitable operation.

Woodworking machinery manufacturers in the United States offer you the services of a $150,000,000 investment in engineering talent, production facilities and modern plants. Progress is their business. Take full advantage of their services . . . investigate . . . see how their progress in new machines can help you to produce more profitably.

Your competitive market is growing keener year by year. Workers' skills are changing. Costs are higher . . . and you must produce more in both quantity and quality to stay in the lead.

Put a profit in your woodworking with MODERN MACHINES

WOODWORKING MACHINERY · MANUFACTURERS' ASSOCIATION · WMMA

WOODWORKING MACHINERY MANUFACTURERS ASSOCIATION

1900 ARCH STREET
PHILADELPHIA, PENNSYLVANIA

WOODWORKING MACHINERY MANUFACTURERS ASS'N.
1900 ARCH ST., PHILADELPHIA, PA.

Please send further information. I am interested in the following types of machinery_____

Name_____

Company_____

Address_____

City_____ Zone____ State_____

AUTOMATIC TROUT SETWORKS

SAWYER CONTROLLED
FAST—ACCURATE—MECHANICAL

The TROUT SETWORKS has always set the ACCURACY standard for the sawmill industry. KLAMATH MACHINE & LOCOMOTIVE WORKS, INC. now has designed sawyer operated, automatic remote controls for the KLAMATH ANTI-FRICTION BEARING TROUT SETWORKS. This has been accomplished with no alteration whatever in the mechanical principles which give the TROUT SETWORKS its unfailing accuracy.

NOTE THESE FEATURES

1. **Complete sawyer operation.**
2. **Trout accuracy maintained to .015"**
3. **Setting speed maintained.**
4. **Automatic operation reduces wear on parts.**
5. **Maintenance is simple.**

Representatives in Washington, Montana and Northern Idaho: AIR MAC, Inc., 3838 Fourth Avenue South, Seattle 4, Washington, and AIR MAC, Inc., E. 3710 Trent Avenue, Spokane 10, Washington. In Arizona: Arizona Mining Supply Company, Prescott, Arizona.

KLAMATH MACHINE & LOCOMOTIVE WORKS INC.

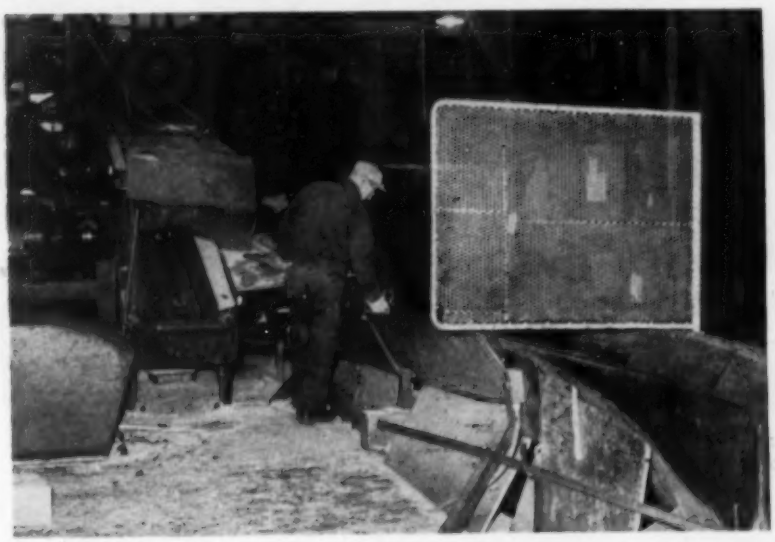
P. O. BOX 208 • KLAMATH FALLS, OREGON, U. S. A.

Look for the Indian Head on all **KLAMATH MACHINE** *products*

Export Division: **FRAZAR & HANSEN, Ltd.**
301 Clay Street, San Francisco 11, California, U. S. A.

British Columbia Firm Uses Safety Ideas in Mill

THREAT OF FALLING material from a chain table feeding to resaw at Pacific Pine Co. Ltd., New Westminster, B. C. is eliminated by three pipe guards. Table is 12' above ground. Each pipe is fastened at right angles to old shafting underneath deck. Chain length joins tops of pipes, hooks to fixed point at left (arrow), holds pipes in "load-in-place" position. When fork lift brings in new load, chain is unhooked. Counterweight on third shaft swings pipes to horizontal position so load can be placed. Chain is rehooked to "safe" position.



SCREEN ON FEED to chipper at Pacific Pine Co. Ltd. protects men straightening material in conveyor and also others in area. Wire screen, 33" high and 44" wide, is welded to half-inch pipe frame in turn welded to one inch pipe upright. Upright passes directly through one bracket welded to conveyor side. About 6" from bottom of upright, above level of second bracket, metal collar ⅛ x 2 x 4 inches, is fitted on upright pipe. Large nut is welded on this bottom bracket, allowing the screen guard to swing away from the operator a quarter of a circle only, thus permitting him to clear long material which may be in the conveyor.

Saw Guard Protects Worker

ALBERT T. JOHNSON (r.), power saw operator in container assembly unit at McClellan, Calif. has developed first practical guard for California cut-off saw, widely used in box factories and other milling establishments. Saw is good performer, but has been despair of safety engineers because no practical guard could be devised for high speed machine. Johnson received $180 suggestion award for designing safety device in which State Industrial Safety Division has shown interest (Harold E. Ferguson, left). Johnson has been rewarded for eleven out of thirteen suggestions submitted to improve the working conditions in his branch.

Publications Available

THE NATIONAL SAFETY COUNCIL, Chicago, Illinois, has the following educational material available:

- "Supervisors Safety Manual", a 354 page book illustrated with photographs and drawings. It includes material on the human side of safety, maintaining interest in accident prevention, first aid, protective-equipment, housekeeping, materials handling, machine guarding, portable power tools and fire prevention.
- "Five-Minute Safety Talks for Foremen", Book 6, contains 52 talks designed to build sound attitudes on accident prevention.
- "National Directory of Safety Films", which describes more than 1200 films available without restriction on distribution.
- 1956 edition of Accident Facts, which shows frequency rates of various industries. Twenty-five of the 40 basic industry classifications reduced their frequency rates. Average accident frequency rate for employees in all industries was 6.96 in 1955, a reduction of four per cent from the year before. Communications industry had lowest frequency rates; electrical equipment held second place.

THE LUMBERMAN Wins Safety Council Award

• In late May THE LUMBERMAN was officially presented with a plaque from the National Safety Council, as a public interest award for exceptional service to safety in 1956.

The non-competitive annual award is presented to those publications who have given editorial support to industry safety programs during the calendar year. This is the third consecutive time THE LUMBERMAN has won this plaque award.

Why tough-service drive and conveyor jobs demand LINK-BELT roller chain

RESISTANCE TO TENSILE STRESS is achieved with properly heat-treated, accurately machined side bars made of premium steel and fitted with properly hardened pins, bushings, rollers.

STRENGTH OF CHAIN IN MOTION results from such refinements as pitch-hole preparation, micro-finish of parts, special processing of side bars, pre-lubrication, rigid quality control.

THE *greater dynamic strength* found in Link-Belt precision steel roller chain is essential for long life on today's harder-working drives and conveyors. This added capacity to resist shock loads, centrifugal loads and similar stresses is achieved only because Link-Belt adds refinements in manufacture.

These include lock-type bushings, shot-peened rollers, pre-stressing, closer heat-treat control. The result: a precision chain that takes stresses in stride . . . provides smoother, more efficient performance that measurably outlasts ordinary roller chain — reduces costs.

For full data on Link-Belt roller chain, see your Link-Belt office or authorized stock-carrying distributor.

LINK-BELT

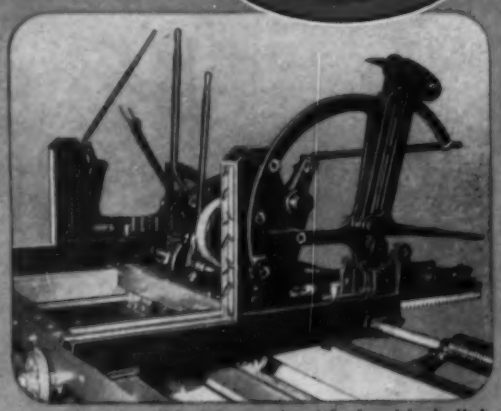
ROLLER CHAIN & SPROCKETS

LINK-BELT COMPANY: PACIFIC DIVISION: Plants, Sales Offices and Factory Branch Stores at San Francisco 24, Los Angeles 33, Seattle 4. Sales Offices and Factory Branch Stores at Portland 10, Spokane 10, Salt Lake City 1. Stock Carrying Distributors in Principal Areas.

You'll profit most with

TRADE FRICK MARK

Sawmill Equipment



Boss dog headblocks are furnished with built-in taper adjustment, hammer dog, or standard taper attachment and drop dog.

In this day of faster saw speeds, more powerful engines, and greater accuracy, you can get the highest production only with the latest improved equipment.

Frick sawmills outsell all others because they give you unequaled savings in time, labor, power and money.

See for yourself what these superior Frick features mean: get catalogs from your nearest Branch or Dealer today, or write

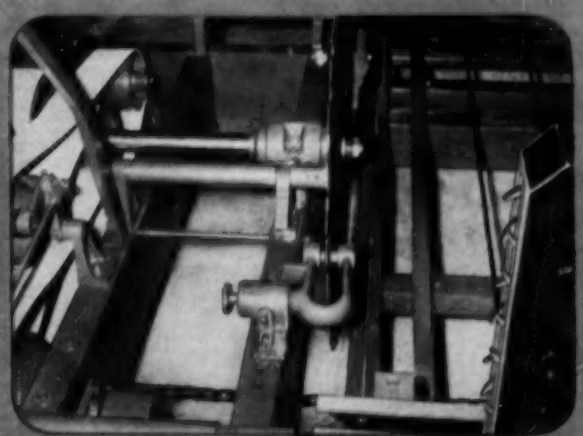
FARM & SAWMILL MACHINERY SINCE 1853

FRICK CO.

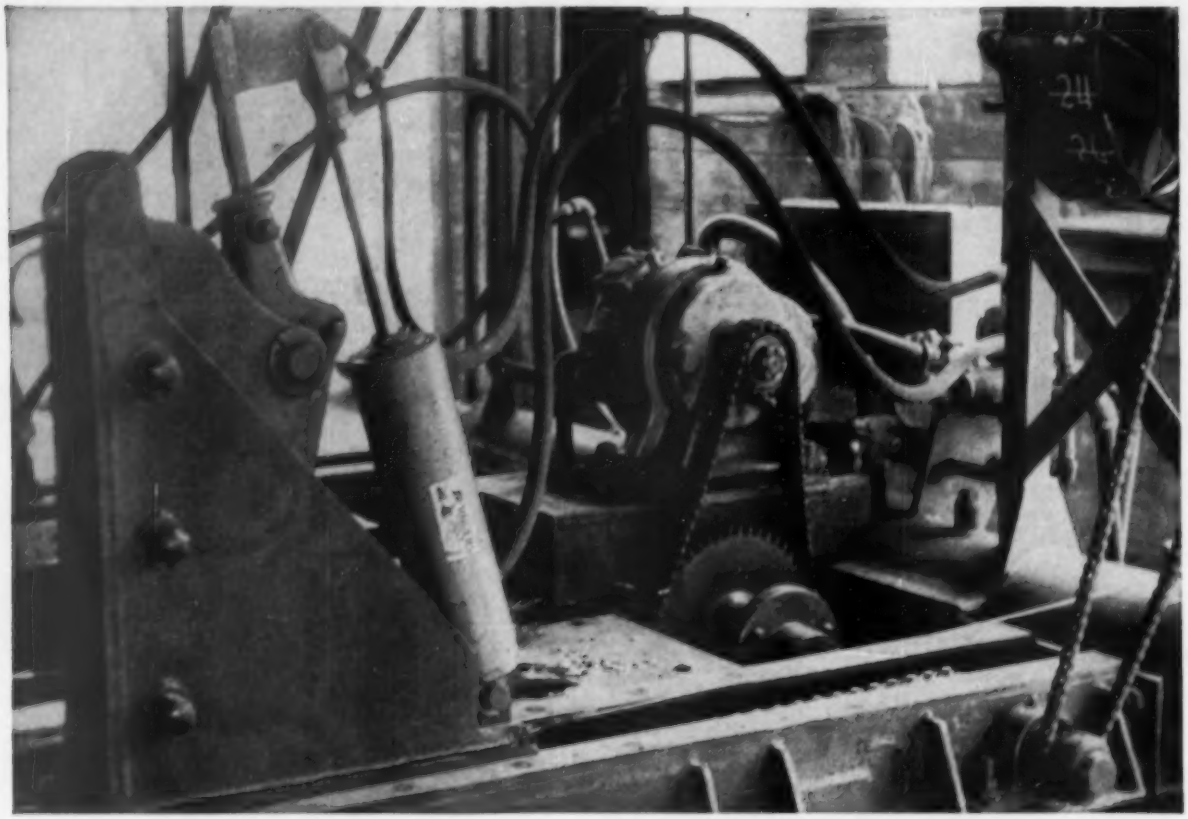
WAYNESBORO, PENNSYLVANIA, U.S.A.

Branches at Richmond, Charleston, Knoxville, Salisbury, Columbia, Atlanta and Montgomery; Direct Factory Representatives in other areas.

New overhead sawdust drag features V-belt drive and ball-bearing sheaves; is lighter running.



Universal saw guide, with pivoted adjustable yoke.

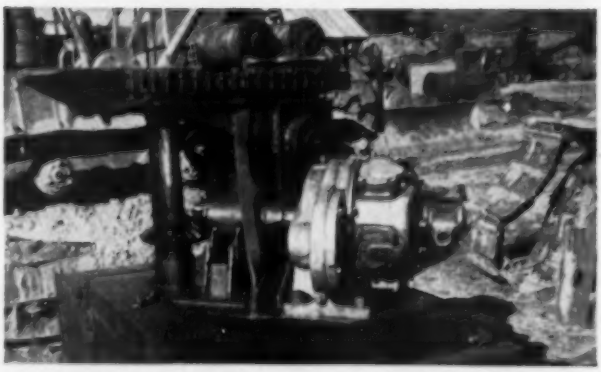


Gardner-Denver Model MEG air motor powering set works.

Never heat up . . . can't burn out . . . they're tough Gardner-Denver Air Motors

Constant starting and stopping won't heat up Gardner-Denver air motors. Drive them hard. When overloaded they just stall—never burn out. Gardner-Denver air motors stay on the job, require little maintenance. They're built to hook up and forget about.

Gardner-Denver air motors are easily adaptable to a wide range of mill jobs. They develop high torque at any speed, have remote-control advantages. Geared or direct drive models, from ¾ to 15 hp. Six sizes to choose from. Our engineers will gladly cooperate in the development of an application for your mill. Write for literature today.



Gardner-Denver air motor powering log loader.

ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING

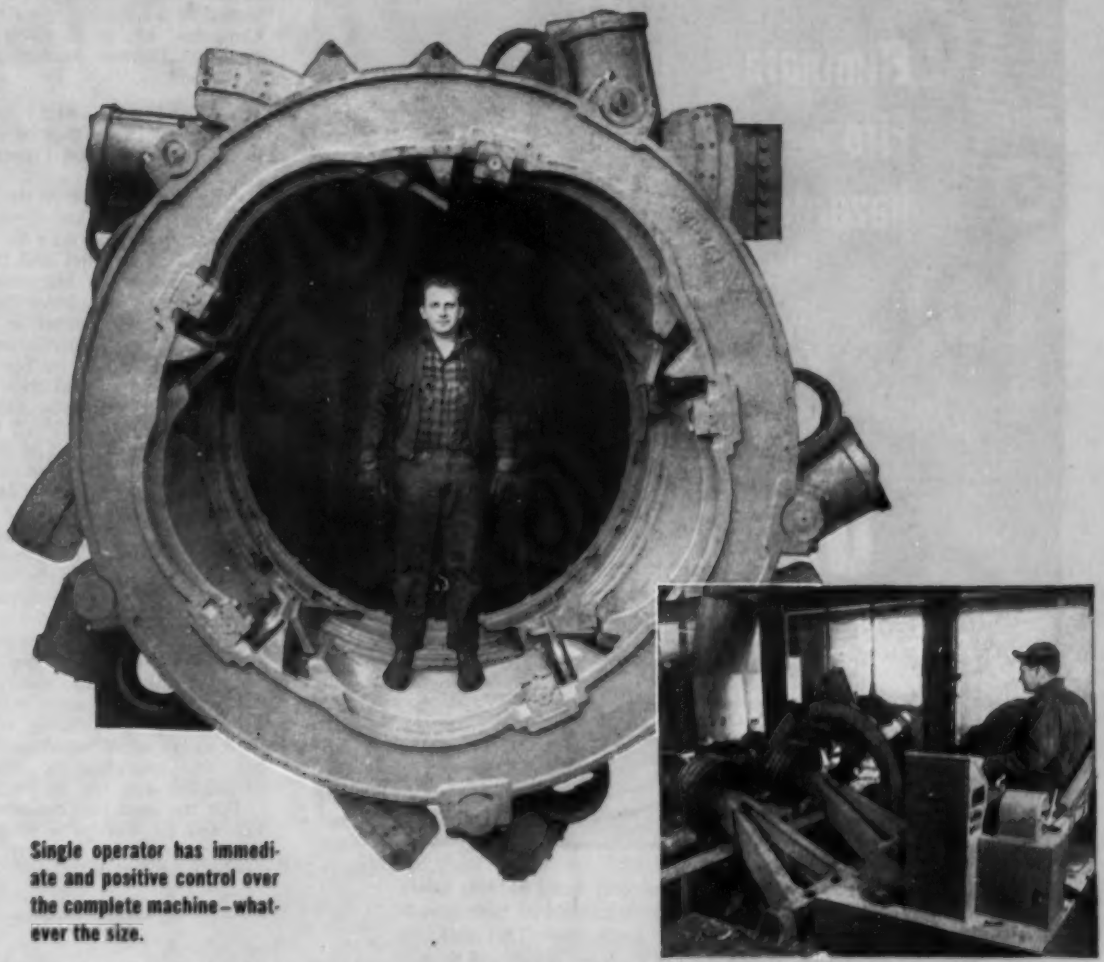
GARDNER - DENVER

Gardner-Denver Company, Quincy, Illinois
Branch Offices: Seattle, Vancouver, San Francisco, Los Angeles, Salt Lake City, Denver and Wallace, Idaho.

BUILT FOR VERSATILITY

NICHOLSON ROTOBARKERS

ENGINEERED FOR EFFICIENT LOG DEBARKING



Single operator has immediate and positive control over the complete machine–whatever the size.

Nicholson Manufacturing offers a full line of widely accepted, high production log barking equipment. Select size and model to suit your individual mill requirement. Nicholson Rotobarkers handle lineal log feed rates of from 30 to 130 feet per minute... log diameters—2" to 72"... Features include proper log cleaning for all processes—all timber species... One man operation, low horsepower requirements and minimum wood loss. Before you buy any barker, for any purpose, at any price, call on Nicholson Manufacturing... specialists in a specialized field. Write or wire for complete information and quotations.

NICHOLSON

MANUFACTURING COMPANY

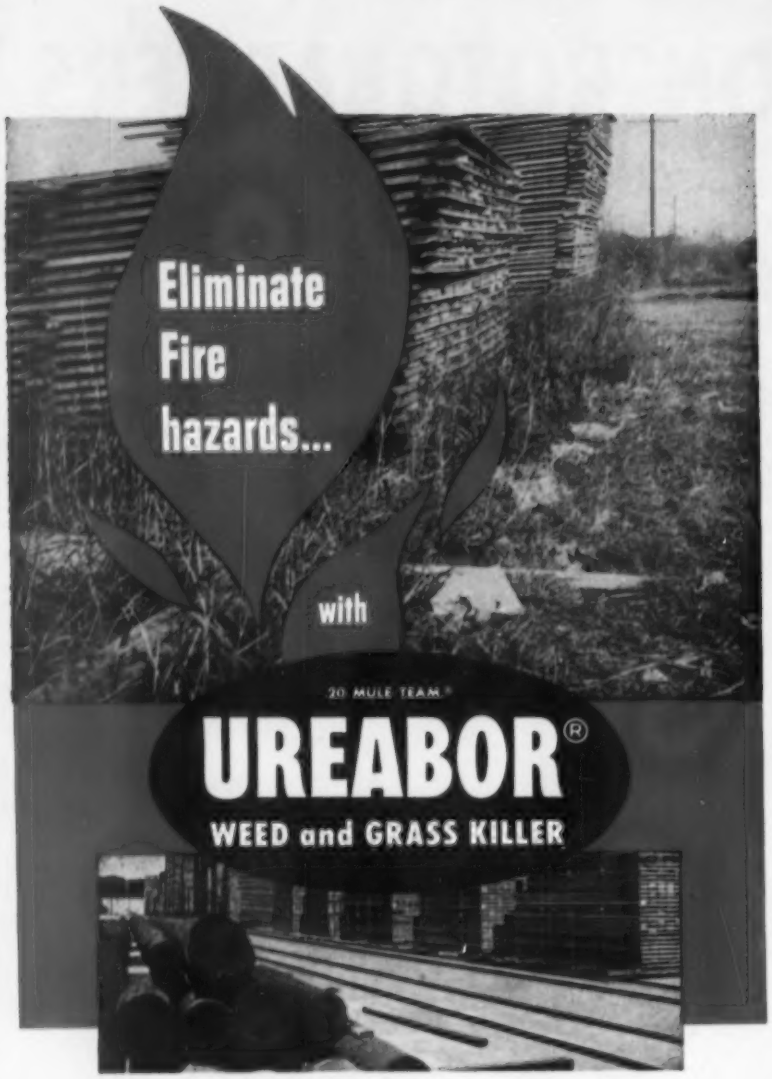
Designers and Builders of Production Woodworking Machinery

Log Barkers - Sash & Door Machines - Trim Saws - Special Machinery

Office and Plant: 35125 "A" St. S.E.
Auburn, Washington, TEmple 3-4800

In Canada: Available from
Nicholson-Murdie Machines, Ltd., Victoria, B.C.

Represented in the South by Wilco Machine Works, Inc., P.O. Box 3722 Municipal Airport, Memphis, Tenn.



UREABOR is your easiest way to destroy weed hazards safely and economically! You get full season control of both broad-leaf weeds and grass from a single application. This dust-free granular weed killer is applied DRY—there is nothing to mix ... no water to haul. It is safe to use anywhere; is nonvolatile, nonflammable and noncorrosive to ferrous metals.

UREABOR is concentrated; it combines the plant-destroying action of sodium borates and substituted urea. Only 1 to 2 lbs. per 100 sq. ft. is required for effective control! This low rate is quickly and uniformly applied with a special spreader available for $10.75 delivered, anywhere in the U.S.A. The PCB Spreader is light-weight and sturdy—holds enough UREABOR to treat 2500 sq. ft. at the 1-lb. rate without refilling.

Write today for Service Bulletin 15-W

United States Borax & Chemical Corporation
PACIFIC COAST BORAX COMPANY DIVISION
630 SHATTO PLACE, LOS ANGELES 5, CALIFORNIA

Tall Timber

(*Continued from page 5*)

in more forest products organizations as any other man.

Currently he is president of the Industrial Forestry Association, and he has held working vice presidencies in the West Coast Lumbermen's Association and the Pacific Logging Congress. He is a director of the National Lumber Manufacturers Association.

HIS KEEN INTEREST in research is evidenced by his membership on the board of the Oregon Forest Products Research group.

Nils has grown up in the Hult sawmill business and knows most of the old-time employees by their first names, their families and their children. He is one of his crew, and his men respect and admire him for his ability, which accounts in no small part for the excellent relationship with his men. He thinks he has the finest trained and most loyal crew of men in the industry, which is another indication of the character of the man.

Nils is rather typical of the younger generation of sawmill men who are taking over the reins from older hands, and who are introducing into the Douglas fir industry a wide variety of progressive new ideas both in manufacturing, utilization, better management of their forests through tree farming, as well as in the newer field of merchandising. Nils is one of the strongest backers of the industry's national advertising and promotion program, for he knows that in order to endure and exist in competition with many other substitutes for lumber, this sprawling fir industry has to get out and sell its products.

For the next two decades or more this tall fir will be a power in the West coast lumber industry, as he has in the past decade.

Flooring Meeting Scheduled

• Northern Hardwood Flooring makers will hold their summer meeting on June 21 at Green Bay, Wisc.

W. W. Gamble, White Lake, Wisc., president of the Maple Flooring Mfrs. Assn., states that time will be devoted to the usual semi-annual discussion of the building business and a review of the association's trade promotion and research activities.

Mr. DeWitt, chairman of the MFMA advertising committee, will speak on new uses for maple flooring and the unusual success of the association's promotion of Northern hardwood flooring for paneling walls and ceilings.

Industry leaders attending will represent Northern flooring mills in New York, Pennsylvania, Ohio, Illinois, Michigan, and Wisconsin.

clear-span Soulé Buildings

SERVE MILL AND WOODS OPERATIONS BEST

More Space — the post-free interiors of Soulé Buildings give more usable work area — important when you're handling logs. Clear-span frames help you plan more efficient chain, mill or plywood plant operations. And if you are warehousing forest products, you can store more in post-free Soulé Buildings. **Mobility** — Soulé Buildings bolt together quickly right in the field. There's no welding or riveting. When your site moves, you dismantle your Soulé Building, move it and re-erect it with 100% parts salvage. **Low-Cost** — building parts are mass produced for economy. Standardized design and easy erection with even unskilled labor gives you big savings in initial cost. And rugged Soulé Buildings need little or no maintenance.

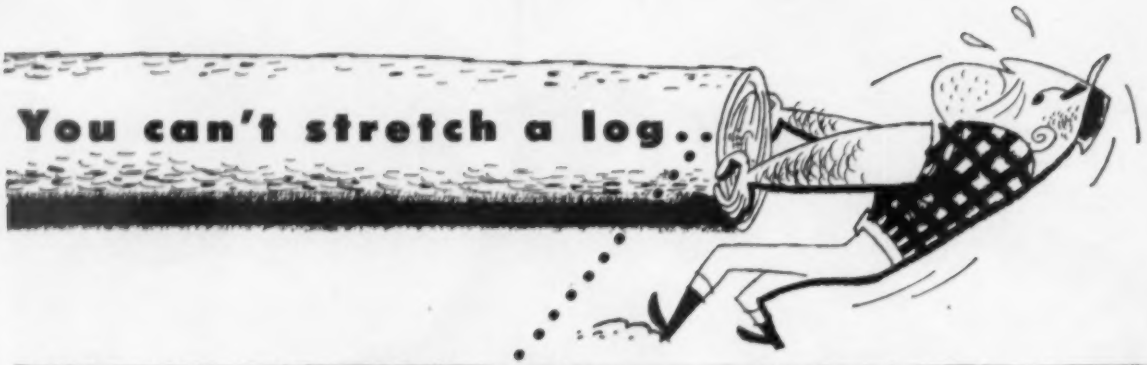
Soulé
LEADER IN STEEL BUILDINGS

Inquire about low-cost Soulé Buildings for your lumber application.

SOULÉ STEEL COMPANY

San Francisco 1750 Army Street, VAlencia 4-4141
Los Angeles 6200 Wilmington Avenue, LUdlow 5-0911
San Diego 1975 Fifth Avenue, BEImont 2-1071
Portland 2630 N.W. St. Helens Road, CApitol 3-5154
Seattle 4100 West Marginal Way, HOlly 3600
Spokane 41 Gray Avenue, Riverside 7-8063
Phoenix 2026 South 11th Avenue, ALpine 3-3178
Salt Lake City 220 Greyhound Bldg., EMpire 3-7728

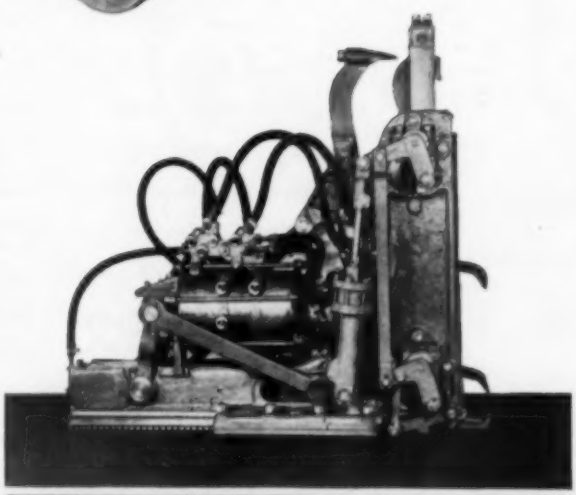
4181



but you can stop waste with Filer & Stowell Air Dog Carriages

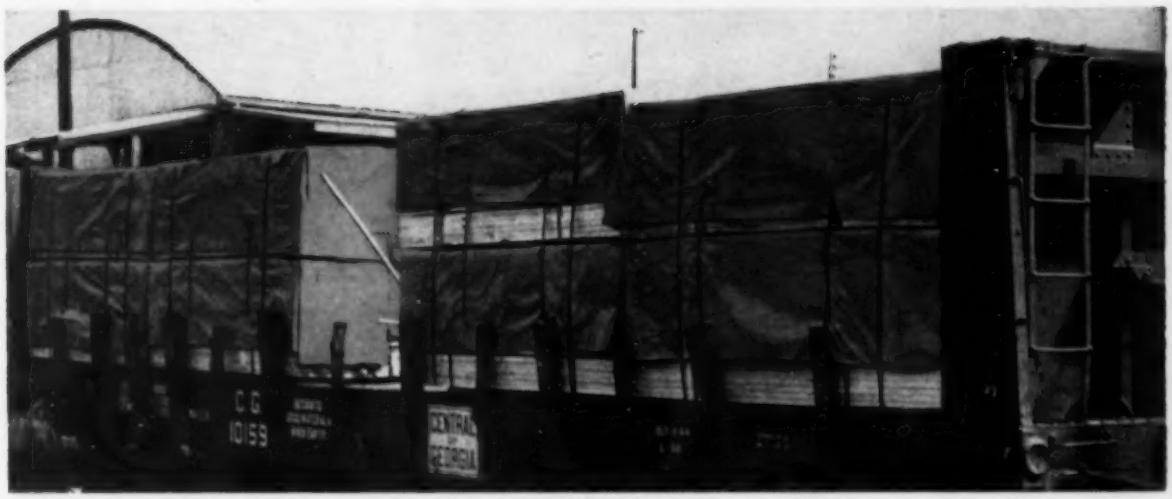
PRODUCTION costs drop like magic wherever a new Filer and Stowell air carriage goes into action! It's the most successful carriage available . . . and naturally so, because it's the only carriage designed to meet the increasing needs of the industry. Don't let slow, old-fashioned methods eat up your profits! This new modern Filer & Stowell carriage will pay for itself quickly in *more lumber . . . better lumber . . .* at *lower production costs.*

Find out today how a small investment in a Filer & Stowell carriage will pay big dividends in more profits year after year. Trained saw mill engineers are available at no obligation. Write or wire for complete information.



The Filer & Stowell Company
147 EAST BECHER STREET
MILWAUKEE 7, WISCONSIN

WORLD'S LARGEST BUILDERS OF SAW MILL MACHINERY SINCE 1856



IN TRANSIT

LOADING & UNLOADING

FOR STORAGE

SHIP PACKAGED LUMBER... Save Material Handling Costs... Storage Costs...for Your Customers

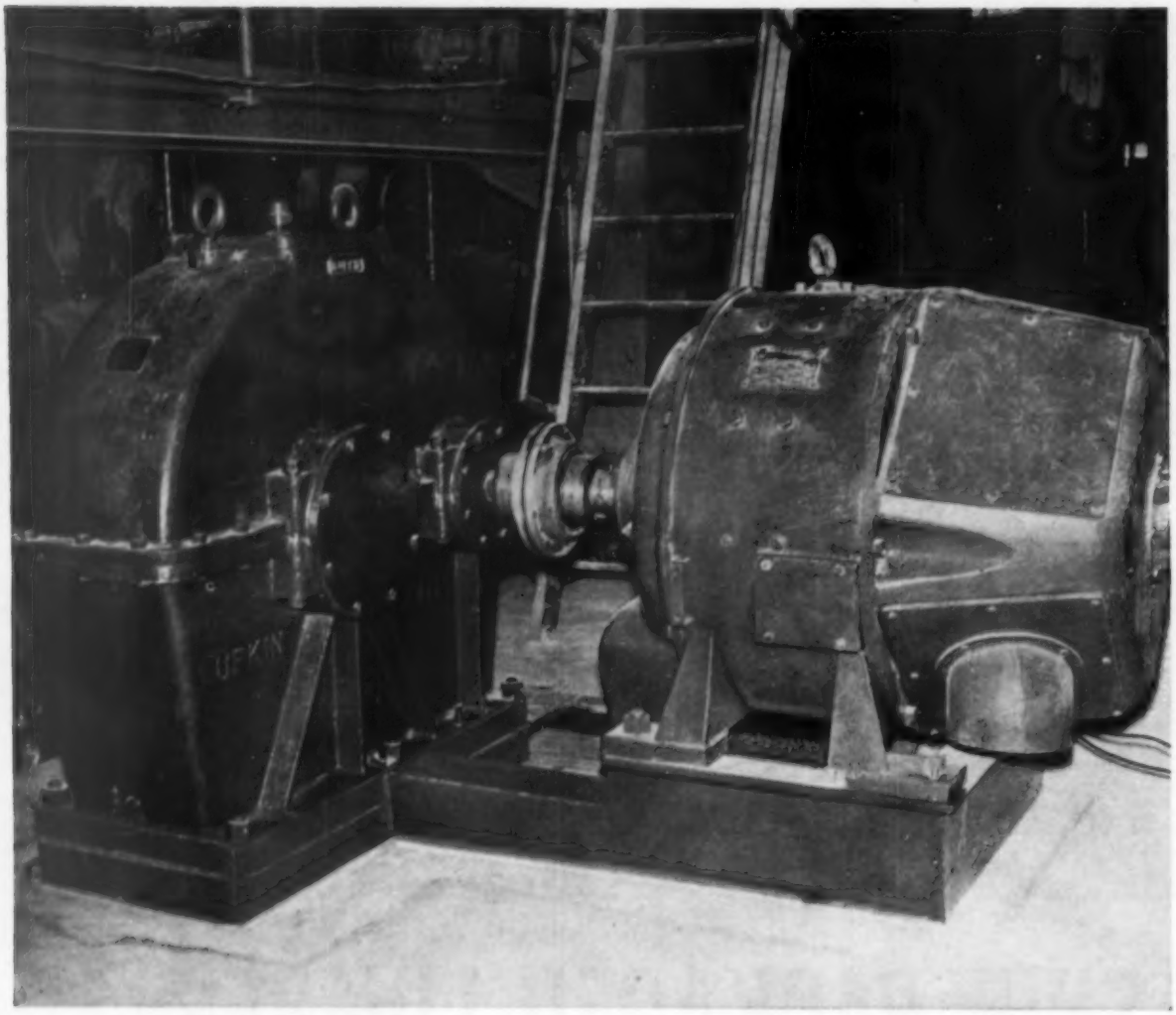
Yes, the mill that cuts its customer's costs is in a favored position. You are regarded as a supplier with the dealer's interest at heart — and abreast of modern developments when you ship your lumber on open cars — protected with FIBREEN! And remember . . . shipping on flat cars means tremendous savings in loading *and* unloading . . . packaging with FIBREEN protects the product from dirt and weather from your mill to the customer's door.

FIBREEN products are available in a variety of combinations . . . asphalt and non-asphalt laminants, flat and creped krafts and a selection of strengths. Most *any* widths are made to answer your problem. Prefabricated lumber covers are also available for packaging lumber. In certain applications, these covers mean easier and faster covering plus improved re-use characteristics.

Write us today at Attleboro, Mass., for your copy of our booklet "How to Protect Lumber with Waterproof Paper for Shipment and Storage."

American SISALKRAFT Corporation

Chicago 6
New York 17
San Francisco 5
IN CANADA — ALEXANDER MURRAY & COMPANY, LTD., MONTREAL



MEROPA RETAINS ITS STABILITY INDEFINITELY

In action on your gears and bearings, *Texaco Meropa Lubricant* always stays at peak efficiency. That's because it never thickens excessively, never foams. It remains stable even when attacked by high temperatures and excessive moisture. The results are certain: better protection, lower maintenance cost.

Texaco Meropa Lubricant gives your gears and bearings the best possible protection against wear because it has a non-corrosive lubricating film which *stays on* metal surfaces. Gears run quieter because they're running smoother. And the outstanding EP qualities of *Texaco Meropa Lubricant* assure dependable performance and high loading capacity under the most adverse conditions.

Ask a Texaco Lubrication Engineer to help you keep production up and costs down with Texaco lubricants. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TEXACO

TEXACO Lubricants and Fuels

FOR THE LUMBER INDUSTRY

How Do You Measure Up As A Supervisor?

By
ROBLEY D. STEVENS, LL.B., LL.D.
Management Consultant

SOUND MANAGEMENT-EMPLOYE relations are essential to economical and efficient operations of a firm in the forest products industries. It is possible to get a better day's work from supervisors and employes alike when mutually satisfactory relationships exist among them.

A systematic merit rating program will provide your management with the information essential to gain the highest supervisory quality and performance. Any merit rating program is not a substitute for intelligent and enlightened personnel relations, but one can be applied in a practical manner to help supervisors improve their efficiency.

Skills and abilities of all employes should be fully utilized. The burden of effecting this falls squarely upon management. If supervisors are inefficient, full utilization of employes is licked from the start. Increase in labor turnover rates arising from competition in the forest products industries for skilled workers may be minimized by providing high quality supervision.

Good supervisory selection and training is important to every employer, but if it is not supported by good supervisory rating, it may be substantially nullified to your program. Giving supervisory rating to those who lack the personal qualities and abilities required by supervisors is like watering a garden where nothing has been planted.

STUDIES BY MANAGEMENT today indicate that employers in the forest products industries look for the following qualifications in supervisors:

• Leadership ability • Mechanical ability • Initiative
• Organizing ability • Technical skill • Character
• Judgment • Physical and Mental alertness

ALL EMPLOYERS in the forest products industries—large and small—are concerned with cost. An improperly selected, trained and rated supervisor may be costly. This factor is increasingly recognized by businessmen. It's a rare thing to find any organization which considers its supervisory jobs today in the light of rewards for dogged, faithful service. A systematic, purposeful approach to filling supervisory jobs seem to be the rule in management.

The value of a supervisory merit rating program, is twofold. It not only gives management a clear picture of which men are below par or above par, but it also affords a factual and non-emotional basis for discussing each supervisor's good points and weak-points with him with a view toward bringing up his work and supervisory performance.

A supervisory merit rating program that fulfills such requirements pay dividends. It will turn up supervisory talent that otherwise might never be recognized. In a smaller firm, persons with good supervisory potentials are frequently overlooked. In a larger firm the risk of this is substantially magnified. The program should spotlight supervisory talent obscured by one or the other factor.

Authorities in management say that a merit rating program for supervisory personnel is a sort of insurance policy against the appointment of individuals who just can't make the grade as supervisors. The program also helps to bolster workers' morale.

The knowledge that a definite merit rating program is in effect often relieves the anxiety of workers that they may not get the recognition they actually merit and that others, less worthy, might get preferment. It all salves the wounds of employes disappointed in their expectations to know that their abilities were considered, and they may try again for the next supervisory opening.

Today, many firms endeavor to find people within their organizations who can be promoted to the job of a supervisor whenever a vacancy occurs. They seem to do this since it has a definite bearing on the growth and development of supervisors. Today, more and more skilled workers in American industry seem to be looking for jobs that offer career opportunities. If management holds to such a policy of promotion from within, employes will feel that your company offers these career possibilities.

THE FIRST STEP in any merit rating supervisory program entails that of job analysis—what the supervisor does and the requirements for his job. Job analysis provides pertinent information relating to the nature of a specific job.

Often, however, in the analogous situation of selecting a supervisor, there is some temptation to try to fill the job without realizing that anything more than a supervisor is wanted. All supervisory jobs have some common elements. It seems important to recognize that no two supervisory jobs are identical, because in many instances, the differences are as important as the similarities.

Today, employers in the forest products industry are in need of supervisory leadership of the highest quality. It is an art that may be acquired, cultivated, and practiced by all who supervise, but it is a continuing process. A careful delineation of the background and characteristics required for supervisory job can eliminate many undesirable persons for the job.

Here is a self-revealing self-analysis for every supervisor. It can enable your supervisors to determine their adequacies and inadequacies for further growth. Check your answers with "Yes" or "No."

SUPERVISOR'S SELF-ANALYSIS CHART

Understanding My Organization

Do You . . .

- Understand the functions of your job and your department and how they contribute to the total program of your company?
- Show each employe how his job fits into the over-all picture?
- Know how to determine the lines of your authority and responsibility?
- Determine the number of and types of employes needed?
- Make a logical assignment of your employes based on a clear outline of your authority and responsibility?

Getting the Work Out

Do You . . .

- Give instructions that are clear, understandable, and specific?
- Review work for progress in meeting your schedules?
- Coordinate the work of your department?
- See that your employes do what is expected of them?
- Emphasize the control of cost?
- Minimize the necessity of overtime work?
- Resolve your production problems at once?

Your Planning and Schedule Work

Do You . . .

- Keep up with the workload?
- Give priorities of work and schedule proper attention?
- Plan for the best use of manpower, space and equipment?
- Set realistic goals for your subordinates?
- Allow subordinates to participate in setting their own goals?

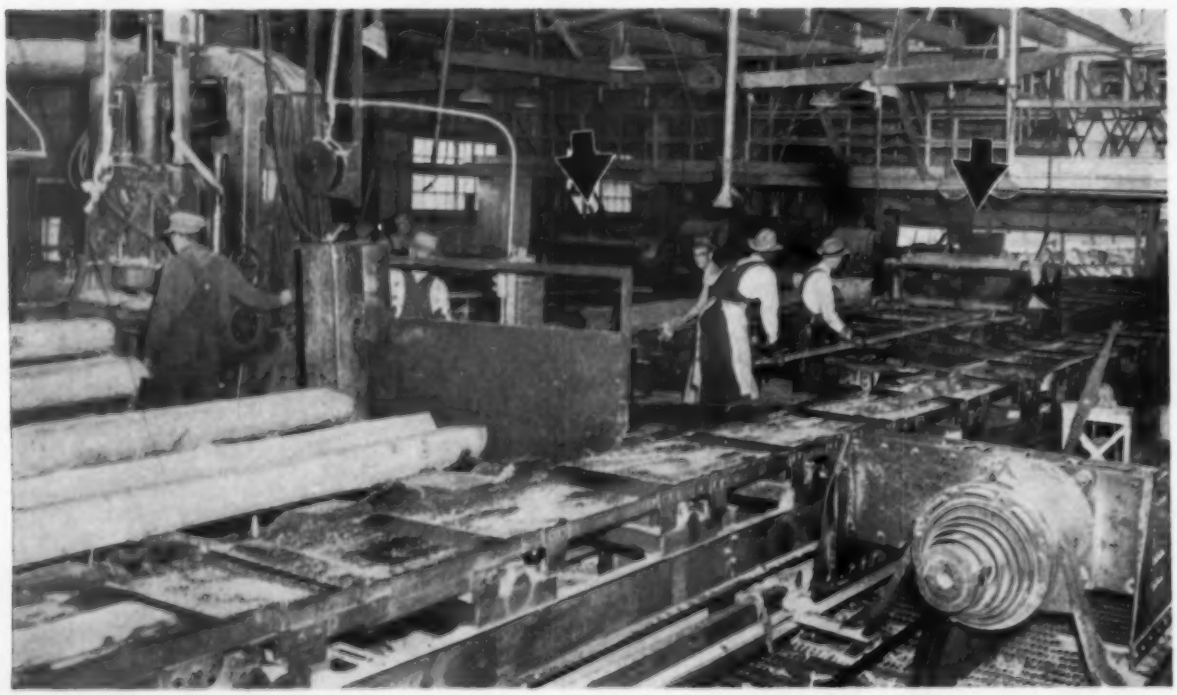
Improve Your Working Methods

Do You . . .

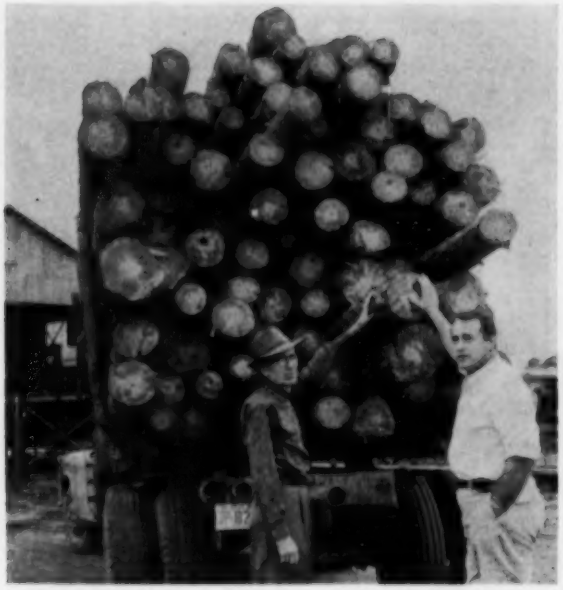
- Analyze your department operations?
- Evaluate present methods of performance?

(*Continued on page* 107)

AERIAL VIEW of Angelina County Lumber Co. at Keltys, Texas. Buildings shown are: (1) Nicholson log barker, feeding from the log deck at right; (2) the sawmill; (3) chipper and chip loading; (4) Wheland edge sorter; (5) Lawson stacker; (6) Moore Dry kilns; (7) cooling sheds; (8) Moore Dry Kiln unstacker; (9) dry sorting chain; (10) dry storage sheds; (11) power house; (12) the planing mill.



INTERIOR VIEW of sawmill showing Mill Engineering Super 36 cant gang at far left, receiving stock from two headrigs. Two Filer and Stowell edgers (arrows) receive stock from F & S headrigs and gang mill.



LOOKING AT LOAD of national forest logs, at top, are (from left) Vernon Ellis, mgr., and Arthur Lehmann, forester. At left, Orton torque-control crane unloads log truck with Mack grapple. Truck is Chevrolet 6400. Train loads are unloaded twice weekly.

Mill Revamps Dry Sorting and Lumber Stacking Systems

Angelina County Lumber Co., Kelty, Texas, builds new facilities which utilize mechanical handling

WHEN FIRE SWEPT the Angelina County Lumber Co. at Keltys, Texas, in July, 1954, it wiped out the dry kilns, dry sorter, rough sheds and four million feet of lumber. The 65 year old firm is a principal southern pine producer, turning out lumber at about 10M bd. ft. per hour in its two head-rig sawmill (see accompanying flow chart).

New facilities were rushed to completion in ten months, with all engineering planning done by H. E. Bovay, Jr., consulting engineers. Work started at the sawmill trimmer and continued through to the planing mill.

Principal Equipment

(Numbers Refer to Flow Chart)

NO. 1: **Nicholson** 30" Rotobarker; NO. 2: circular 72" deck saw, operated by air cylinder; NO. 3: four block **Filer and Stowell** carriage, with air operated **Filer & Stowell** setworks; NO. 4: three block **Filer and Stowell** carriage, with air operated F&S setworks; both carriages driven by **General Electric** 186 hp. amplidyne drive. NO. 5 AND 6: **Filer and Stowell** single cut 9 ft. bandmills, driven by 250 hp. motor; NO. 7: **Mill Engineering** Super 36" cant gang, driven by 125 hp. motor; NO. 8: **Filer and Stowell** 60 x 26 inch edgers, 5 saw; NO. 9: **Murray** 60" chipper, driven by 150 hp. motor; NO. 10: slasher; NO. 11, **Filer and Stowell** 26 ft. trimmer, with **Wheeling** air operated saw lifts; NO. 12: lath department.

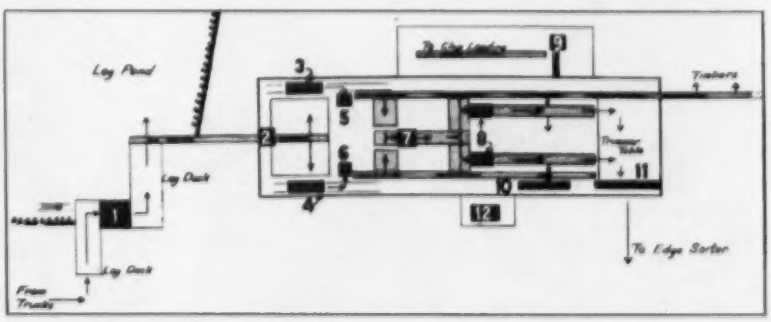
Other Equipment

Orton torque-control shovel, with **Mack** grapple on 60 ft. boom for handling logs from truck to deck; three **Ingersoll-Rand** 275 cu. ft. compressors, driven by 75 hp. motors; **Hanchett** equipment in filing room; **Rex** elevator and **Rotex** 82 screen in chipping room; **Rogers** NT102 knife sharpener for chipper; **Link-Belt** bearings and **Poly** V-belt drives on headrig drives.

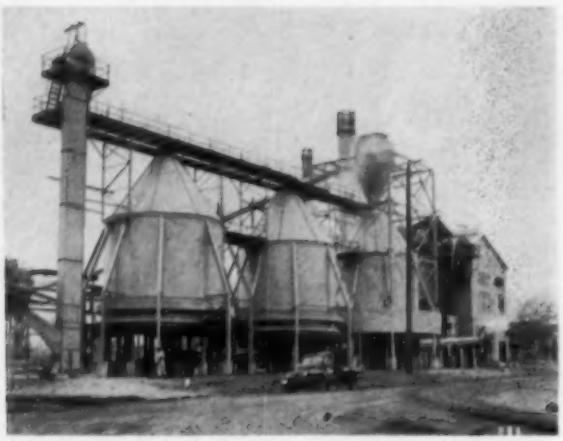
Wheland 28 bay edge sorter, with **Westinghouse** motors on bay chain drive system; six **Moore Dry Kiln** kilns, four 3 track and two one-track, with **Century** motors in control room; **Lawson** stacker; **Moore Dry Kiln** unstacker; **Baker-Lull** Traveloader.

Angelina Builds on Fine Tradition

- **Fire in 1954 destroyed company's dry kilns, dry sorter and rough sheds.**
- **Reconstruction started from trimmer in sawmill and reached to planing mill. Templates were used by consulting engineers H. E. Bovay, Jr. to try out preliminary plots of feasible fitting between the remaining units. Final arrangement of equipment was selected after about 20 sample layouts.**
- **New facilities were completed in 10 months.**
- **Plant has more than one mile of concrete roads, to reduce maintenance on trucks and protect lumber from dust.**



Sawmill Flow Chart, Angelina County Lumber Company



POWER HOUSE (top photo) receives leftovers from mill, has Westinghouse 3125 KVA turbo-generator. First two silos hold bark and sawdust, fed to overhead conveyor with Rex elevator, left. Third silo holds planing mill shavings. Left photo: Filer and Stowell 3-block carriage is driven by General Electric amplidyne unit through Filer and Stowell 9 ft. bandmill. Log deck has shaker.

Highlights of the new facilities include:

• A belt conveyor carries lumber from the sawmill trimmer to a cross transfer conveyor with five strands of H82 chain. Specialty items which must be separately handled through or around the kilns can be sorted from this conveyor ahead of the edge sorter.

• Green chain conveyor ends in a one-man operated feed station which feeds to an automatic Wheland edge sorter.

• The sorter has 28 bays, 14 on each side. It handles one, two and three inch thicknesses and lengths from eight to 20 ft. First seven bays on one side hold three inch stock and the first seven bays on the opposite side hold two inch stock. The last seven bays on both sides of the central feed chute are for one inch stock.

• Each bay accumulates about 1½ kiln loads of lumber. Lumber from filled bays feeds out onto a belt running along the outside of the 275 foot long building (75 ft. wide), is carried onto a cross transfer conveyor (five strands of H82 chain) leading to the Lawson stacker.

• From stacker loads are lowered with hydraulic lift to 200 foot length of track to await transfer to green storage area outside of kilns. A complete kiln charge can be accumulated on the tracks leading to the four triple track and two single track kilns.

• Loads from dry kilns go to two

Ernest Lynn Kurth

As president of Angelina County Lumber Co., Ernest Lynn Kurth holds another important responsibility in the area around Lufkin, Texas. He is also president of Southland Paper Mills, Inc. and a director of Lufkin Foundry and Machine Co. and has been a past president of the Southern Pine Assn., and a past vice-president of National Lumber Manufacturer's Assn. He is head of a dozen different firms and advisor to many more.

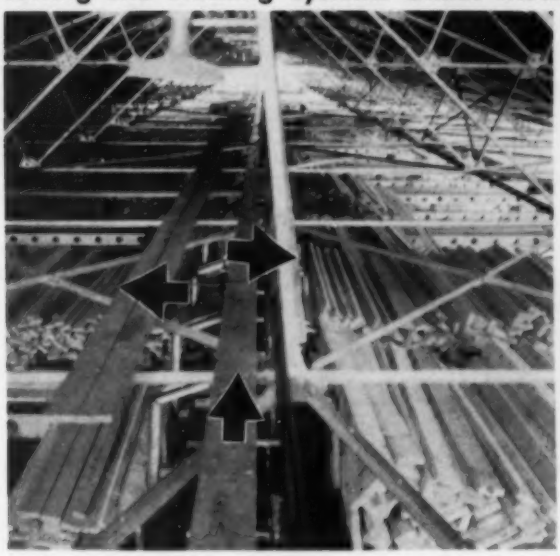
Mr. Kurth's efforts over the past 50 years have transformed Angelina County from a relatively obscure agricultural community into one of Texas' most important industrial areas. At 72, his interest in forest conservation and utilization continues unabated. He knows the industry from the first seedling to the last 2 x 4. He is recognized as an international authority on forest conservation.

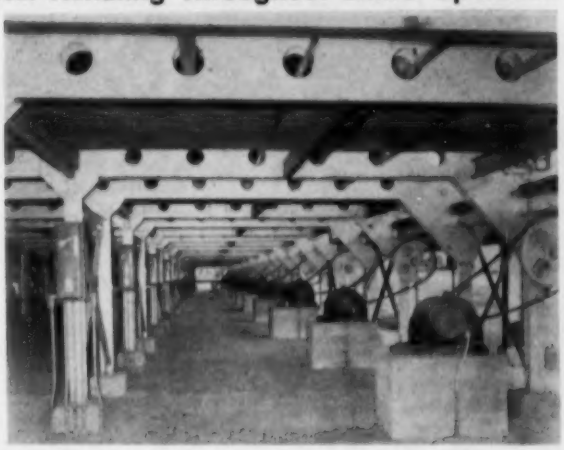
This white-haired titan of the piney woods is tall, heavy-set, cavalier—like. He dresses casually, but carefully; his dusty Stetson hat is a kind of trade mark. His eyes are penetrating and black and he has a wide grin. Mr. Kurth attributes his ability to manage such a large number of industrial operations to careful selection of top echelon men. His son, E. L. Kurth, Jr., is general manager of Angelina County Lumber Co.

CHIP LOADING station with Ford F-800 truck and Lufkin trailers. Chipper is Murray 60". Overhead hopper fills trailers.

BAKER-LULL Traveloader stacks lumber on either side of runways 4 packages deep, with side loading fork lift for narrow runways.

Sorting and Stacking Systems Utilize Mechanical Handling Throughout Entire Operation





TWENTY-EIGHT Westinghouse motors, ranging from 3 hp. in front to 7 hp. at far end, power chains on Wheland automatic edge sorter which carry lumber from bays to belt feed to stacker. Fourteen motors for half of bays are shown above. At left, top view of Wheland sorter, showing lengthwise lumber travel and side discharge by length, from 8' to 20'. First 7 bays on right hold 3" stock; first 7 on left hold 2"; last 7 on both sides hold 1" stock.

cooling sheds, for rail transfer to the Moore Dry Kiln unstacker, a rake-off type with automatic sticker removal. Kiln cars and stickers are returned to the stacker by rail and conveyor on 275 ft. long system.

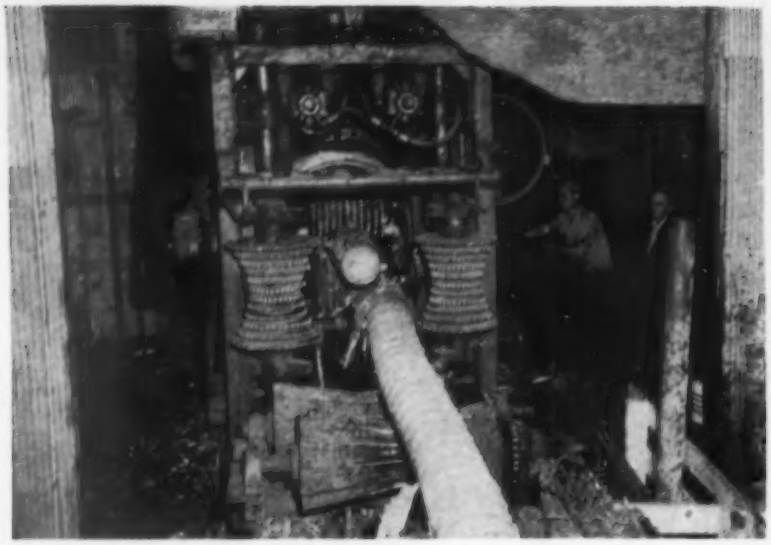
• Dry sorter consists of five strands of cable, from which lumber is sorted into 4x4 packages, which are delivered to the rough storage buildings by straddle carrier. Dry sorts are #1, #2, #3 and B and Better. Widths are from 4 to 12 inches. Ceiling and car stock are also sorted.

• Piling in sheds is done with a Baker-Lull Traveloader, with side loading fork lift. Concrete aisles 11 ft. in width running across sheds are spaced 20 feet on center. Lumber can be stacked on either side of runways to height of four packages. The Traveloader also picks up packages from storage sheds and transports them to

(*Continued on page* 78)

LAWSON STACKER at right receives stock from Wheland automatic edge sorter, prepares packages for six Moore dry kilns with capacity of 500 M bd. ft. Stacker handles about 100 M board feet daily.

OUTSIDE VIEW of stacker and unstacker system. Building at far left is Lawson stacker; building in center is Moore Dry Kiln unstacker, rake-off type with automatic sticker removal. Return system for stickers and kiln cars is between two buildings.



CLEAN PINE LOGS emerge from 26" Anderson barker with 30-hp main drive.

Barker Saves Manpower

Louisiana sawmill produces better lumber and tons of chips with aid of log barker.

WINCH ON REAR of truck serves as cross haul to move logs into trough leading to whole log barker in the building. Arrangement eliminated one man from log handling work at this mill.

HEADRIG FOR Foote Lumber Co. is this 64-inch circular saw. The mill also has a circular resaw. Average daily production is 46,000 board feet log scale in 16 hours, two shift basis.

REDUCTION IN SAW FILING freed one man for other work after the installation of a log barker at the Foote Lumber Co., Alexandria, La. A more efficient log handling arrangement installed with the machine has relieved another man. The plant now handles approximately 230,000 board feet of logs per five day week.

Small southern pine logs are decked near the log haul leading to the debarking operation. A truck with a winch mounted on the rear cross hauls the logs from the deck into the trough feeding the barker. Up to 52,000 board feet of logs have been handled by this mill in a 16-hour day.

From the Anderson 26-inch ring-type barker, logs go by inclined log haul to the sawmill. The barker has a 30-hp electric motor as its main source of power and a five-hp motor on the feed rolls. The air compressor takes another 25-hp.

A single circular saw, 64 inches in diameter, reduces the logs to 4/4 lumber with the aid of a circular resaw. Saw changes are now made about every five hours, instead of every two hours.

Material of any length is suitable for chipping. Bark-free slabs and edgings are conveyed directly to a chute leading from the mill floor to the chipper below, which is an Anderson HI-60 equipped with four knives turning at 400 rpm. A flat-belt drive connects the electric motor and chipper. Chips go from the chipper up to a cyclone above the Dillon screen.

From the screening operation, chips drop into a 20-inch blow pipe system leading to the box cars. From eight to nine cars of chips are produced per week, working two shifts, five days. Average car contains 90,000 pounds of chips; an average of 2900 pounds of chips are made with each 1000 board feet of lumber.

Vernon Lewis is general superintendent, and Ramey Vurcher, Jr. is production superintendent at the Foote Lumber Co. plant.

NSDJA Grants $5,500 for Millwork Training Course

• The Northern Sash & Door Jobbers Association, Chicago, Illinois, has made a grant of $5,500 to Michigan State University for the development of a Millwork Correspondence Course for industry personnel.

The proposed educational program is one of the many outgrowths of NSDJA's Basic Millwork Training Courses held in 1956 and 1957. NSDJA jobbers have continued to emphasize the value of industry education for their personnel. Regional Meetings, Research Institute Sales Clinics, Association Training Courses all assist in insuring well trained and experienced millwork salespeople to better serve their retail lumber dealer customers.

My Responsibility As a Head Sawyer

Some of my experiences as a sawyer in the past 48 years, the men with whom I work, and our present set-up, a change from steam to electricity.

By

R. J. SMITH

AT THE CONTROL of his rig is R. J. Smith, head sawyer, Angelina County Lumber Co., Keltys, Texas.

MY MOTTO AS A SAWYER is, first the Bill Board (my orders) obeying special instructions, cutting what it calls for, making a board that will sell and timber that will stand up under inspection. Quality above quantity.

The responsibility as a sawyer to a company for whom he works is what the man means to the community in which he lives. If he is a man who is trying to make the place in which he lives a better place to live, he is an asset to the community. But if he is a man just trying to get what he cen out of the community, he is a liability.

Such sawyers as the last mentioned are known as carriage runners, log cutters, butchers or slashers.

One of the head officials of this company was visiting in Europe. He sent me a card and wrote, "Im depending on you to keep the log in the saw." These words have stuck with me and helped me realize my responsibility as a sawyer. Placing the log correctly on the carriage so it will make straight lumber might take a little time, but I think it pays. A log that is worth bringing to the mill is worth our time to cut it right.

A SAWYER SHOULD cooperate with the man he works for and the men he works with, namely, the foremen, millwrights, saw filers and block setter. The foreman of course is responsible for everything that comes under his supervision.

Each man has his responsibility. The mill wright keeps up the carriage and track and all other machinery. The filer keeps up the band mill and guide and, the big job, the saws.

In working out our problems it is a good idea to use the Golden Rule, "Do unto others as you would have them do unto you."

A sawyer talking to a filer about a saw that was not running well had some unpleasant words. The filer worked on the saw and returned it to the sawyer to use again. The filer asked the sawyer how it was doing. The sawyer replied in a loud voice, "It's running around and around." The filer walked off, not finding out if the saw was giving satisfaction. It is good policy to use kindness instead of animosity and patience instead of impatience.

This company hired a block setter who had set blocks all over this part of the country. When he started to work he said to me, "You can saw as fast as you want to." After three weeks of work he said, "I've never worked for a man like you. You don't give me any time to rat on the job, but you do know how to treat a man and I like that."

I try to keep in mind I'm handling a man as well as a log.

WE HAVE A FOUR BLOCK carriage and can cut 14 feet on three blocks or 18 feet on four. We seldom ever cut longer than 24 feet. That only gives a three ft. over-hang. I have never seen a carriage that is any better for making uniform lumber. Sometimes this company accepts orders for 14 x 14 bridge caps. They usually want them dressed to exact size. Our planer can't dress anything over 12 inches so we make them near exact at the mill. If the company ever had a come-back I have never heard of it.

We had 14 inch steam feed. This was replaced by two electric motors, 186 horsepower AC and 186 horsepower DC which is very easy to control. This was above my expectation. It moves very quickly but you can keep a more even feed on saw than steam and it is much safer. If your control switch plays out there is a limit switch down in track that cuts the current off. The bumper sets back 12 ft. from limit switch and with a dead motor the carriage will run back and strike the bumper but not hard enough to do any harm. If we had another four ft. longer track on each end I don't think it would strike the bumper, using 1¼ inch cable.

We had some trouble with cable at first breaking every few weeks, but our shop foremen and mill foreman and millwrights have overcome that by removing two sheaves downstairs over the wall bar, making an arch wall bar and putting a stationary hanger on each end of carriage. This keeps the swing out of the cable and holds cable straight in the sheave ing the cable tight and well lubricated. We haven't had a broken cable in nine months.

WE DID HAVE OFFSET on the carriage but have done away with it. We are using a sliver tooth saw and it is very satisfactory. By removing the offset the carriage is much smoother and is not as much trouble to keep up.

With the offset I was pulling off saws frequently. Of course, if I had good luck it might be one, two or three years. I haven't pulled off a saw in eight years with no offset and using sliver tooth saw.

We have a nine foot band mill, pulled with 250 horsepower motor which is 50 horsepower surplus. The electrician says that is much better than having just enough power to pull the band mill. The motor will not get as hot using the V type belts. There is no slip so you have a steady speed. That is something we did not have with steam and the old flat belt. The saws run 11500 ft. per minute. When saws are new ,they are 14 inches wide, 50 ft. long and 13 gauge tooth space, 1⅛ inch.

We get around five or 5½ wear off saws. Four saws will run us around two years, running 50 hours a week.

We have had some trouble cutting some hardwood that this company has to buy to get the pine. It takes a little different saw for hardwood than for pine. We do not get enough hardwood to change our saws. Instead of banking logs for several weeks or months, we cut them as they are brought in. They cut much better green and live sawed if possible, with the bark edge up.

(*Continued on page* 103)

Mr. Smith is head sawyer at Angelina County Lumber Co., Keltys, Texas

Inventory System Checks Species, Grades and Amounts

Fir Milling and Planing Co., Ashland, Ore. correlates office records with yard locations of lumber piles

HOW MUCH LUMBER is in the yard?

What stock is in each pile and how long has it been there?

These important factors could, under adverse conditions, be the difference between "making it pay" . . . or "not making it pay".

Knowing the quantity, specifications and moisture content of specific lumber items on hand determines whether or not to accept an order. For critical rush orders this information is vital; it's also convenient for normal day-to-day operation.

Fir Milling & Planing Co., which operates a 65M bd. ft. sawmill and planing mill at Ashland, Ore., has an inventory system, jointly developed by Richard Reyman, executive partner-manager and asst. mgr. E. C. Musgrave, which answers the above questions. How it works is explained on the opposite page.

MR. MUSGRAVE CLAIMS these advantages:

- The amount of a specific item in the yard can be ascertained immediately.
- A complete inventory, broken down by item can be taken and submitted in written form within two hours at any time.
- The method for keeping the continuous inventory data fits in with the jobs of piling and tearing down (both on contract basis) so effectively that the contract data records are used for inventory purposes.

Fir Milling & Planing Co.'s yard consists of three component areas with capacity for five million feet of stock stickered for air-drying. Components are named and every pile bottom numbered. The inventory control board, maintained in the office to show current status of yard stock, represents a schematic layout of the yard areas, complete to numbered pile bottoms of each. For every pile of lumber in the yard a colored tab (the color denoting species and/or grade) hangs on a pin at the appropriate "pile bottom" on the board.

PILES IN THE DRYING YARD are, except for low volume items which may be grouped, made up of homogeneous lumber—each pile containing but one species, length, width, thickness and grade. This holds true down through No. 3 common. The volume of No. 4 common, however, is too small to segregate by length. Consequently piles of No. 4 lumber normally contain random lengths.

According to Mr. Musgrave, he has three methods of verifying inventory figures obtained at the end of the month on continuous inventory work sheet (see opposite page):

- By adding, one column at a time, all open entries in the perpetual work sheet—the sum of which will coincide with inventory data as developed by above method.
- By totaling amounts represented by tickets hanging on inventory control board—which also coincide with the present inventory.
- By actually checking in the yard.

THE SYSTEM ALSO KEEPS track of stickers used in the yard. When piling fir lumber stickers used are obtained from that same stock. Thus, a portion of a given volume of fir going to air seasoning yard ends up in the pile as stickers and the rest as stickered stock.

White fir 2x4s—dry, whenever possible, to minimize stain—are used as stickers for drying pine.

All stickers are considered as a yard item and, in turn, shipped as per any other lumber according to orders.

To keep track of sticker volume in pine piles, Musgrave says, "We have a 'sticker' column in our perpetual work sheet for recording the quantity going into each pile." The yard gyppo crews record this information on their yard reports and this is carried on each of the three types of inventory records.

(*See illustrations on page* 43)

Highlights of This Lumber Inventory System

The system embraces three types of inventory records:

- **Typewritten pile cards, one of which is affixed to the face of each pile of lumber in the yard.**
- **Colored tickets, each corresponding to its pile card counterpart, which hang on inventory control board in office, their position there-on determined by in-yard location of the stock concerned.**
- **A continuous inventory work sheet.**
- **All three records show the species, grade, size, length, volume and location of each yard unit and the date piled.**

New Seaboard Box Cars Prove Popular

• The Seaboard Air Line Railroad's specially-designed box car with doors 20 feet wide for handling packaged lumber has proved so successful that the line expects to have 10 more such cars—bigger and better—in service by the end of the year.

The new cars will be 22 inches higher on the inside than the original car. This will provide a maximum inside height of 10 feet and six inches as compared to the eight feet and eight inches of the prototype car. Doors on the new cars also will be 22 inches higher than those on the first car, giving a maximum vertical clearance of 9 feet and eight inches.

Increased height will make possible a maximum load of about 32,000 feet of lumber, depending on package sizes, as compared with 25,000 feet for the original car. Additional inside height will provide for loading more packages, or, in some cases, as much as 15,000 pounds more than the prototype car.

New cars will have the same door arrangement as the original—two doors, each 20 feet wide, set diagonally across from each other at opposite ends of the car. This permits simultaneous loading or unloading with fork lift trucks at each door.

The new cars will be of all-steel construction, material for which already is on order and scheduled for delivery in August. Steel sides and doors are being built by the Camel Sales Co., Cleveland, Ohio, steel ends and roofs by the Standard Railway Equipment Manufacturing Co., Hammond, Ind. Assembly work will be done at the Seaboard's shops in Portsmouth, Va.

Mahogany Brochure Released by Association

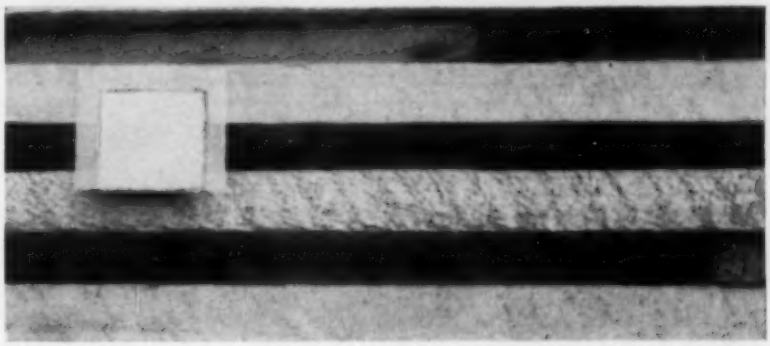
• A new brochure, "Do It Yourself With Philippine Mahogany," has been published by the Philippine Mahogany Association, Inc., South Pasadena, Calif., and is now available for distribution. It outlines home improvement projects.

Here's How Fir Milling and Planing Co. Keeps Tab on its Lumber Inventory in the Yard

Yard and No. T 21
Specie S. Pine
Size 5/4
Grade Clear
Dated Piled 7/23/56
Footage 13,500'
Stickers 2,850'
Piled by D
Broken by B + F
Date 11/20/56
Breakdown Paid HC/
R

No. 1 — The Pile Card

SHOWN ABOVE is facsimile of pile card (actual size, 3x3¼ in.), which is placed in clear plastic envelope as weatherguard and stapled to face of lumber pile in yard to which it belongs (right photo). Card is typed in office from data submitted by contract piling crew. Each pile in yard has one species, length, width, thickness and grade. When pile is broken down, crew signs and dates pile card, submits it to payroll department. "R" means pile was roofed.



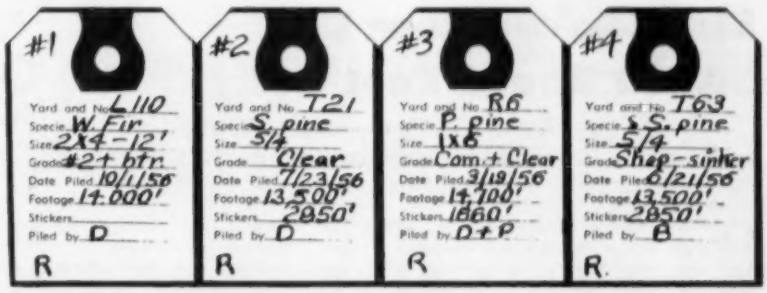
No. 2—Colored Inventory Control Board Card Shows Locations

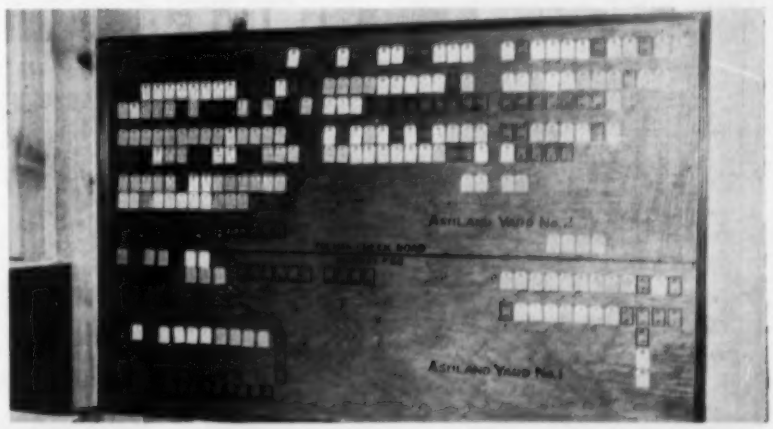
COLORED INVENTORY control board card is made out for each pile (see above) when it's prepared in office. Colors are: white (No. 1), Douglas fir and white fir; all other colors are for pine: yellow (No. 2) for clears, moulding and better; red (No. 4) for all sizes of shop, green (No. 3) for commons. These are placed on inventory control board (photo at right) according to location of respective pile in yard.

Other entry made at this point consists of recording appropriate data from each pile card in continuous work sheet (see item No. 3 below).

When contract pile breakdown crew signs and dates pile card, it's submitted to payroll dept. Breakdown is paid on basis of card. Payroll dept. stamps date of payment on card, returns it to inventory dept. After receiving finalized pile card, inventory dept. removes corresponding ticket from control board and staples it to pile card.

From stapled ticket-card records, which collect in suspense file from beginning to end of monthly inventory periods, inventory dept. can immediately ascertain quality and specifications of lumber removed from yard since beginning of current month.





No. 3 — Continuous Inventory Work Sheet

CONTINUOUS INVENTORY work sheet shown at right. Present yard inventory can be determined by subtracting quantity and specifications of lumber removed from yard since beginning of current month from lumber items on hand at end of previous month.

At the end monthly inventory period break-off line is drawn in inventory work sheet. Below it is entered (for each lumber item, by appropriately headed columns) sum of amount of same on hand at end of previous period, plus all that's gone into yard since. Below entries are recorded amount of lumber item removed during just-ended period. Difference between two figures is recorded for each column, is amount of inventory at end of period.

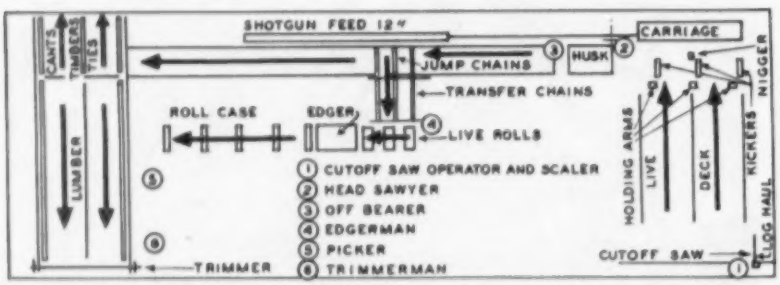
FILER & STOWELL headrig has Sel-Set Works on company-made carriage. The 8-foot saw has a hand set brake which stops the saw in 25 seconds, speeding up changes of saws.

DECK SAW is 8-foot Mall unit. Steam-operated jaws hold up log during bucking.

Six Men on Floor Cut 50,000 Board Feet Daily

Atlas Tie Company in Idaho produces mostly dimension stock

ON the Coeur d'Alene River just west of the city of Coeur d'Alene, Ida., the Atlas Tie Co. is operating a medium sized mill that combines know-how with good equipment and many labor and time-saving devices. The result is a smoothly operating unit, capable of producing 50,000 board feet per day. The mill operates two 8-hour shifts, but at no time are there more than six men on the sawmill floor.

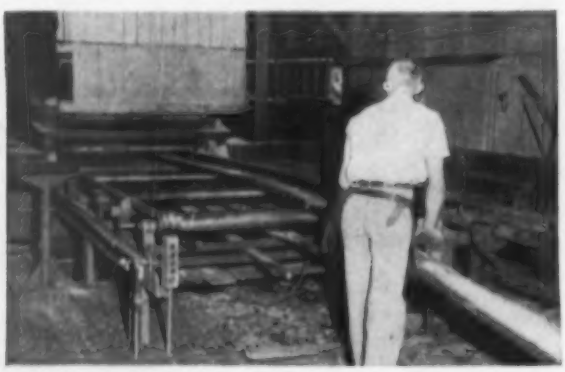


FLOW CHART. Equipment placement in the Atlas Tie Co. mill is shown above. Only six men work on the floor of this mill which produces 50,000 feet a day on a 2-shift basis.

As the company name would indicate, the bulk of production, or about 75%, is dimension stock. Much of the prodution goes to the Milwaukee Railroad. Most of the dimension produced is on order. Although production runs heavy to white fir, the company also dries some ponderosa pine, white pine, and special orders of fir and larch.

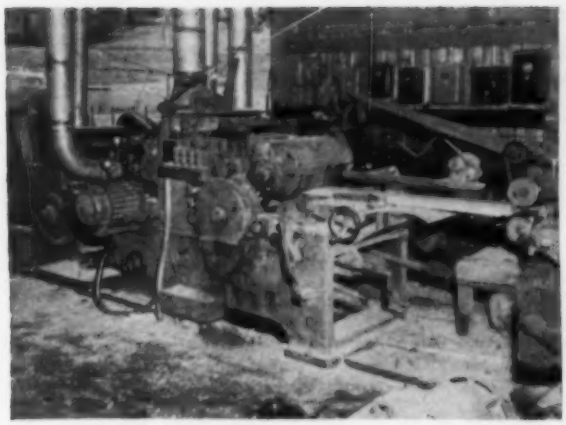
An adequate log pond lies at the edge of the Coeur d'Alene River with a long slip running to the sawmill. Many logs are also placed in dry decks so the mill will have a good supply during hghwater. Many of the smaller farm logs that come in are placed in these decks. A Pettibone Extendo-Reach Cary-Lift does the unloading and decking. When high water makes the use of the river pond impossible, the Cary-Lift dumps deck logs directly into the log slip.

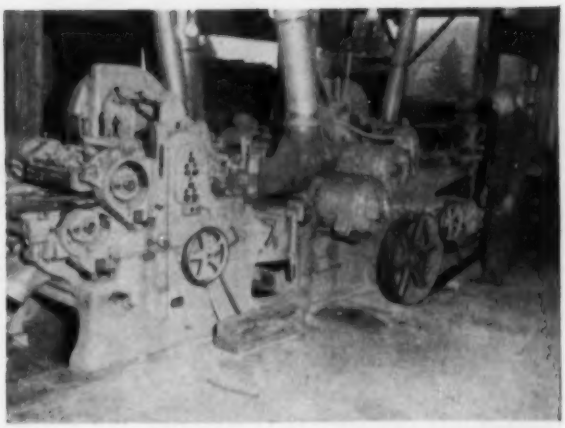
A bull-chain log haul carries the logs through a 5-nozzle, arched washer and up to the cutoff saw in the mill. The operator of the 8-foot Mall chain saw also scales the logs. An example of devices which contribute to the smooth operation of the mill is found at this point. The operator of the bucking saw presses a foot button and four steam-operated jaws hold up the



GENERAL MACHINE CO. edger has four saws, 75-hp GE motor. Edgerman uses shadow line guides, manually sets saws.

TRIMMER is a 12-saw Prescott unit, powered by a 75-hp Fairbanks-Morse motor. Two men work at this sawmill post.





THE PLANING DEPARTMENT is equipped with two planers. Above left is the S. A. Woods unit which is set to feed 200 feet per minute. Above right, is Yates-American A62 unit which is used to produce shiplap. It has side heads joined right on planer.

log being bucked, preventing a bind. The jaws, two on either side of the saw, are lowered as soon as the cut is made.

Cut to length, the logs travel a declined live deck to three stops, which hold them until released to go on the carriage. Three kickers and a steam nigger place the logs on the carriage. The company-made carriage has three blocks and a 48-inch opening. Carriage feed works is a steam shotgun with a 12-inch cylinder. The carriage has Sel-Set setworks, and the power lines are carried to it on an SKF pantograph.

The headrig is an 8-foot Filer & Stowell band. New on the headrig is a handset brake which can stop the saw in 25 seconds. It formerly took 5 minutes for the saw to stop, significant time factor as the saws are changed twice every day.

Next in the production line is the General Machine Co. edger. This machine carries four saws and is powered by a 75-hp G. E. motor. The edgerman uses a shadow line guide and manually sets the saws. Only material two inches or less takes this route. Cants, timbers, and ties go straight through from the headrig to conveyor chains to the outside. The edged material is next trimmed on a Prescott 12-saw trimmer. This trimmer is powered by a 75-hp Fairbanks-Morse motor. A picker and a trimmerman at this point complete the 6-man sawmill crew. Now another trimmer has recently been installed in the planing mill. This is a completely automatic Irvington smooth-end trimmer. Carrying 12 saws, this machine is powered by a 30-hp G. E. motor. There are two planers in this department. A new Yates-American A62 planer is used mostly for the production of shiplap.

KILNS include 80,000-foot capacity double and 40,000-foot single Moore units.

The other planer is a Woods and is set to feed 200 linear feet per minute. The newer machine has the side-heads single. The double kiln, which is two heads are put on a new Jones-Orth joiner in the filing room.

The Atlas Tie Co. operates two Moore dry kilns, one double and one single. The double kiln, which is two years old, has a capacity of 80,000. The single kiln, which is one year old, has a capacity of 40,000. These two kilns dried 12 million feet last year. Most of this is dimension, the bulk being 8/4 white fir. Each kiln has eight 72-inch automatically reversible fans, which reverse every six hours. Robert Caton is the operator and supervisor of the drying department.

New Carriage

Atlas Tie Co. is replacing the present carriage described in this article with a Mater Hi-Standard Duty tong dog carriage. This will be a 48" opening, three block with oscillating tong dogs in each knee and three position tapers on end knees. The six button Sel-Set setworks with air motor drive and follow up system now in use will be retained on the new carriage.

TRIMMER in the planer mill is an Irvington smooth-end unit. It is completely automatic, carries 12 saws, ends conditions lumber.

PETTIBONE Extendo-Reach Cary Lift unloads logging truck. In wet weather it decks from cold deck directly to the sawmill.

NEWSPRINT LOGS, but not for pulp. These small alder logs, steel strapped in bundles, are to be converted into wooden plugs for protection of newsprint rolls while in shipment.

Alder Logs Find Use In Plugging Newsprint Rolls

SMALL WOODEN PLUGS used in ends of newsprint rolls to prevent crushing of the cores may seem like an insignificant device, and to anyone outside the finishing room of a paper mill or the pressroom of a newspaper they might as well not exist.

However, two enterprising young Vancouver, B. C. men — George O'Brien, son of a recently retired vice president of Powell River Co., and John Pitts have successfully launched Spruce Specialties, Ltd., whose production of wooden plugs for newsprint is one of their major activities.

SMALL BUT important device. Here George O'Brien, Jr., (left) and John Pitts, Spruce Specialties, Ltd., examine wooden core plug, one of millions used yearly at Powell River.

Without these plugs, most of the production of Powell River Co., one of the world's great newsprint mills, would suffer serious damage in the several stages of handling. All Powell River's output is routed by ship.

Raw material for the plugs is small alder logs. Many hundreds of cords of this wood, cut to rigid specifications by small loggers in the Fraser valley, are used in the course of a year. Small logs run from 3½ inch minimum diameter to 5½ inches maximum and are cut to eight foot lengths, delivered to the plant and scaled on trucks. From there they are selected by size and thrown into racks. When racks are full, bundles of logs are steel-strapped and removed by fork lift and piled systematically in the yard.

LOGS FIRST ARE RUN through a large dowel machine that acts as a barker and clears the knots and imperfections from them, leaving a clean, peeled log. These are then stacked again by size into feeding racks, from which they are selected and placed in the plug machine.

One operator operates two plug machines simultaneously, as they are set up side by side in banks. A log is placed into the automatic feeder rolls of first one machine and then the other. When the log has been converted into plugs, one at a time and cut off, the machine stops automatically about a foot from the end of the log, giving the operator time to remove the butt of the used log and start a new one into the machine.

As the two machines are set up to make different length plugs, there is a time lag between the stopping of one machine and its counterpart, enabling the operator to load one machine while the other is still running. Thus, a continuous operation results.

When the log is turned into a plug by revolving head, a cutoff saw severs the plug from the log and a conveyor picks up the plugs, carrying them to a waiting sack. Conveyors are equipped with counting devices, indicating when a sack is full, at which time a diversion trough switches the stream of plugs into the next empty sack.

BECAUSE WOODEN PLUGS must be finished to exact tolerances in order to fit the newsprint core, control of shrinkage during the drying process is important. The green plugs are taken from the sacks at the ends of the conveyors, piled on pallets and transported by fork lift truck to drying kilns. Experience has established the drying periods necessary for different sizes and styles of plugs, and these periods vary from two to five days. Species of wood used, moisture content prior to turning and relative humidity in the atmosphere at the place where the plug is eventually to be used are all taken into consideration.

The 3½ inch plugs used by Powell River Co.—a million of them are used annually—spend four days in the dry kiln before they are sufficiently dry to travel to the mill and undergo the correct amount of moisture absorption. A green plug can shrink as much as 3/8 of an inch inside the core, so it's easy to see how effectiveness could be lost by improper drying.

Alder Plugs Offer Utility In Newsprint Industry

Although many substitutes have been tried, the old standby—the wooden plug—remains today the most efficient and economical means of preventing newsprint rolls from collapsing or crushing on the core. This article tells how they are made from alder by a new company in British Columbia.

Flash Dryer Uses Gases To Dry Hog Fuel

Howard Crandell, powerhouse chief at Canadian Western Lumber Division, Crown Zellerbach Canada, stands beside the newly installed Glomera flash dryer at the big Fraser Mills, B.C., plant.

WASTE FLUE GASES are tapped to provide more efficient utilization of hog fuel in a somewhat unique installation at the big Fraser Mills, B. C., plant of Canadian Western Lumber Division, Crown Zellerbach Canada.

A Glomera flash dryer, built to Swiss design by Sumner Iron Works at Vancouver, takes hot gases from the powerhouse stack and uses them to dry out hog fuel. It is the only equipment of its type in Canada using flue gases. Resembling a ventilating system, it is built on the powerhouse roof.

The flash dryer takes hot (400 degrees) gases from the main stack and mixes them with the wet fuel. The mixture is blown up a 500-foot high, six foot diameter drying stack, after which the gases, smoke and moisture are dispersed through a cyclone. The fuel, now at about 150 degrees, is carried to the boilers by a conveying system.

The flash dryer was installed under supervision of Howard Crandell, chief engineer of the power house. A veteran of the Crown Zellerbach organization, parent of Canadian Western, he spent 15 years at Ocean Falls and has been at Fraser Mills for the past 16 years.

By reducing the moisture content from about 50 to 30 percent, the dryer provides a higher quality fuel for the boilers. With most sawmill residues now being converted into pulp chips for more economic utilization of wood, only hogged bark, sawdust and shavings are available to meet fuel requirements. Thus the need for the equipment to up-grade hog fuel quality was established.

The $32,000 installation dries about two and a half units of hog fuel per hour, and results in additional heat equivalent to about one unit. Approximately 15 units per hour are burned to provide power to run the sawmill and plywood plant on the Fraser River, a few miles east of New Westminster.

Plywood Group Anticipates Gain

Although market conditions so far this year have not fulfilled the optimistic hopes of 1956, British Columbia's plywood industry is looking for planty of orders to keep its greatly expanded capacity busy, according to R. C. McMillan, general sales manager of Canadian Western division of Crown Zellerbach Canada, who has been elected president of the Plywood Manufacturers Association of B. C.

Last year, a record total of 1,006,000,000 square feet of Douglas fir plywood was produced by eight manufacturing companies in the province. This represented about 85% of all plywood, hardwood and softwood, produced in Canada and about 90% of the fir plywood production sold on the Canadian market. Production figures are calculated on a 5/16 inch basis.

The 1956 production by all plywood manufacturers in the province was 142,000,000 square feet greater than that of the previous year. It was achieved despite cutbacks in most plants towards close of the year.

Two new plants, MacMillan & Bloedel sheathing mill at Vancouver Plywoods Division and Canadian Collieries Resources Ltd. at Timberland Lumber Division in New Westminster (both described in The LUMBERMAN) went into production last year. A third plywood plant at S. M. Simpson Ltd. mill in Kelowna, went into operation last January.

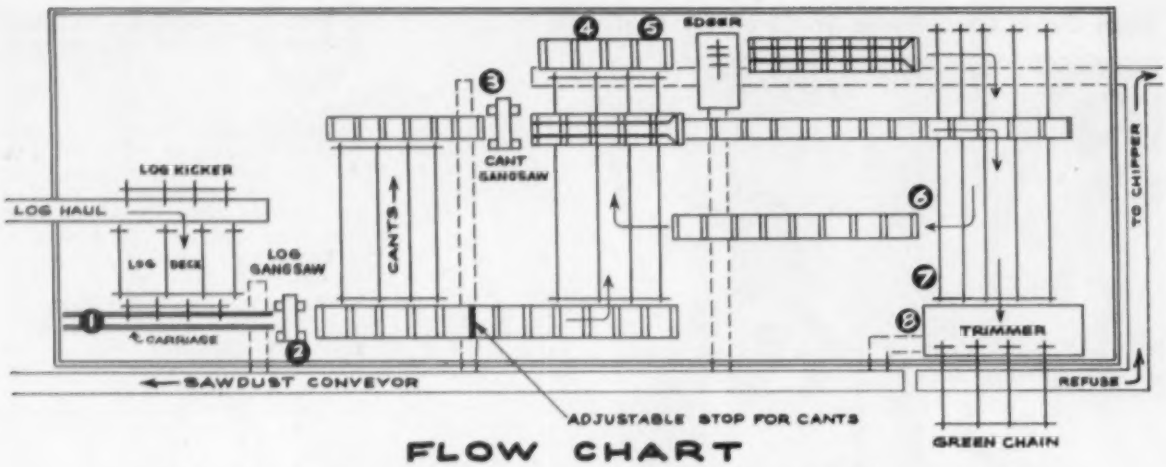
Mr. McMillan succeeded J. S. Johannson, general manager association relations, MacMillan & Bloedel. The new vice president is Rex Humphreys, manager of the Victoria Plywood Division, B. C. Forest Products, at Victoria. Other directors are: W. E. Burns, Canadian Forest Products Pacific Veneer Division; N. D. Cameron, Sooke Lake Lumber Co., Victoria; H. A. Lester, Canadian Collieries Resources, Ltd.; G. R. McKay, Evans Products Co., and G. H. Tullidge, Western Plywood Co., Vancouver.

In order to insure another record in production this year Mr. McMillan believes that there will have to be a pickup in residential construction, because while the industry does not depend entirely on that type of building it has been responsible for a large proportion of the output and tight money has made supply houses reluctant to place substantial orders.

More business is expected from industrial, commercial and public works field, according to Mr. McMillan, who said that heavy construction is absorbing an increasing share of plywood output.

The export outlook is still cloudy, says Mr. McMillan, and Canada continues to be the only large-volume buyer. The British Columbia industry was somewhat disturbed by imports of U. S. plywood, but this was all of interior grade and therefore not in direct competition with most of the Canadian product.

B.C. Plywood Leader is R. C. (Bob) McMillan, general sales manager of Canadian Western Lumber, elected president of Plywood Manufacturers Association of British Columbia.



FLOW CHART

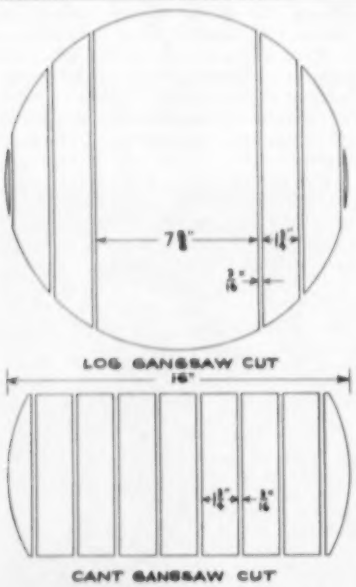
Chart shows arrangement of eight men on mill floor with two gangsaw system

How Two Gangsaws Can Increase Lumber Recovery

By
CARL S. SUNDBOM

ECONOMY AND EFFICIENCY of gang sawmills has long been established by hundreds of mills operating all over the United States and Canada. But the way gang mills are operating today leaves room for considerable improvements in even better utilization of logs and in raising lumber grade.

Mr. Sundbom is president of Mill Engineering and Supply Co., Seattle, Wash.



DIFFERENCE IN cuts made between log gang and cant gang are shown in the above chart.

The pioneer manufacturer of gangsaws in the United States has, remarkably well, kept in step with the demand for higher and higher production capacity by steadily improving the design and introducing new devices such as automatic overhang of the saws, nearly automatic operation of the infeed carriage and other numerous improvements on details of the gangsaws themselves as well as handling equipment. New machines produce twice as much as previously imported old machines.

Problem in gang mills as now generally layed out, is that the edger becomes a bottleneck. Lumber is wasted because the edger is overloaded and the operator is up against the difficult task of keeping up with the output from the gangsaw, and at the same time trying to do a good job of utilization.

Gang mills have tried to solve the problem by improving efficiency of the edger, by speeding up rate of feed and by installing faster arrangement for shifting saws. In some mills, several edgers are used to keep up with the gangsaw. The problem becomes even more difficult when sawing one inch lumber.

SOME GANG MILLS are using a large edger capable of sawing cants produced in the log gangsaw and resawing cants and heavy edgings in a band-resaw. This method is only part of the answer to the problem because of a bigger investment and more men required. Also, lumber is uneven in thickness and this means more waste.

Under present conditions with high priced logs and not so high priced lumber, the time has come for the sawmill men to consider adoption of two gangsaws systems in which the first gangsaw is used to cut the logs, as is being done, but with the saws spaced to cut a cant or cants in the center and two and one inch cuts on the outside. Cants and two inch lumber are separated by a simple arrangement which transfers the cants to the second cant gangsaw and the boards and dimensions to a small edger. This system has long been established in the Scandinavian countries and for several years, in British Columbia, Canada.

It has also been firmly established that with this system recovery from logs is 10% more than in the present system with one gangsaw and an edger. Further, grade is improved and the lumber perfectly manufactured. Railroad ties and timbers also can be manufactured without wasting an excess of material.

This idea has been advocated for a long time. Objections from sawmill men naturally have been the larger investment and preference to highest production per man and machine

(*Continued on page* 106)

2 Gangsaw System Offers More Recovery for Mill Operator

- **Mr. Sundbom suggests that with high priced logs and not so high priced lumber, sawmill men should adopt a two gangsaw system.**
- **The first gang cuts the logs, with saws spaced to cut a cant or cants in the center and two and one inch lumber on the outside.**
- **Cants go to the second gangsaw and boards and dimension lumber to a small edger.**

GARDNER - DENVER 360 cfpm. compressor driven by 75 hp. G. E. motor through Gates v-belts supplies industrial air for entire plant.

ENTIRE CUT from headrig goes through 6x54" Schurman edger which has reversible cross chains.

Sorter Reduces Lumber Handling

MEAD & HOWARD Lumber Company's new 30M per shift sawmill at Kendrick, Ida. Green chain and drop sorter provide ample lumber segregation; Phelps burner disposes of mill's residues.

MEAD AND HOWARD LUMBER CO. has a new 30M bd. ft. per-shift sawmill, at Kendrick, Ida., which began operating in May, 1956. Production is on a two-shift basis. Features include: a log haul equipped with log washer (which reportedly "pays for itself three times each day"), double circular headrig with each saw powered by individual motor, a 6x54-in. Schurman edger with three movable saws and saw bank which can cut seven 2x4s at a time, a Tower two-saw trimmer, and both a drop sorter and green chain.

Lumber leaving the double-end trimmer moves past a tally station to a two-line drop sorter and either enters it or slides down onto the green chain. Whether a board goes to green chain or sorter is determined by the position of hinged bridging arms over sorter infeed. If each of these two sets of arms is raised, stock enters No. 1 sorter slot; when both are down stock moves over sorting slots to green chain.

With the first set of arms down and second one upright, boards go only to No. 2 sorting slot. The tallyman operates these hand-positioned sorting controls. This arrangement materially reduces lumber handling at the mill and also makes for generous segregation. The drop sorter provides 10 sorts and 12 segregations are possible at the short green chain.

A 360 cfpm. Gardner-Denver compressor, powered by 75 hp. G. E. motor, provides air for processing and handling units throughout the mill. A metal conveyor system collects residues from various points in the mill and delivers to a 50x40 ft. Phelps refuse burner for disposal.

Ray Howard is president of the organization, J. M. Mead, vice president, and Rudy Nelson, sawmill mgr.

Poplar As Raw Material For Particle Boards

By
G. GIORDANO

Director, Istituto Nationale del Legno, Villa Favorita, Piazza Edison 11, Florence, Italy

Italy's low timber production has led to a noticeable increase in plantations of rapidly growing wood species and their utilization in board industries. Poplar is particularly suitable for particle boards. Color is uniformly light, moisture content high (although not evenly distributed), density varies rather widely between species, with the highest for white poplar and the lowest for the *Euroamerica* hybrids of rapid growth.

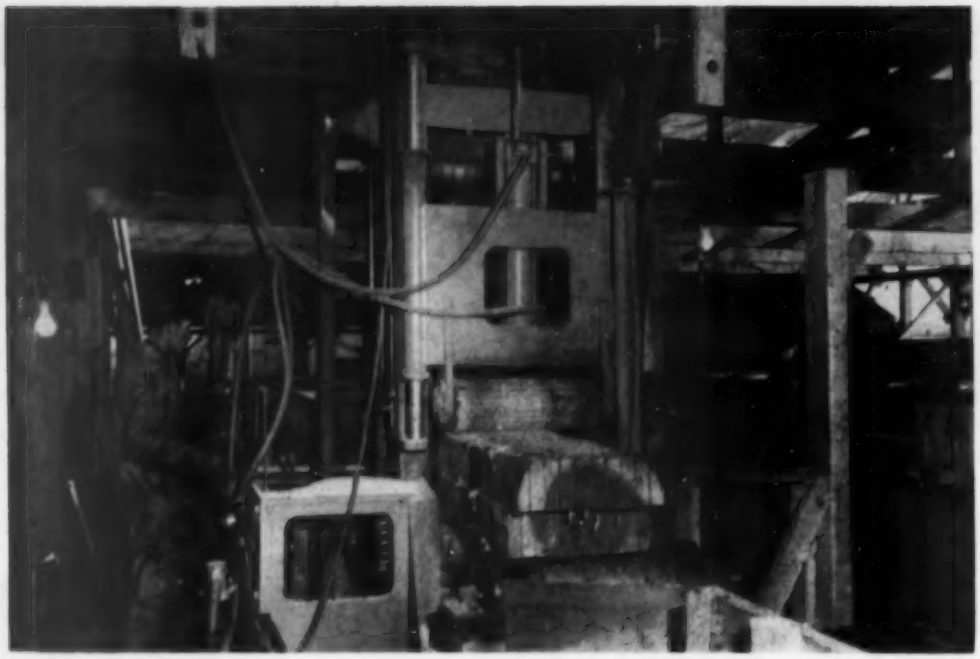
Fibers of these hybrids are generally regular and straight; cracks caused by frost as well as interstices between the annual rings are rare, but tension wood and damage by fungi and insects are frequent. Most suitable diameters for manufacture of particle boards are from 10 to 22 cm. Bigger logs have to be debarked while those ranging from 10 to 14 cm. can be used even with the bark, so that by using 80 per cent of the former and 20 per cent of the latter, costs for debarking can be reduced, usually very high because done by hand.

Logs which have been debarked and cut into pieces of 33 to 50 cm. in length are then processed into particles. To facilitate working, logs have a moisture content of 40 to 45 per cent. Particles for single layer boards should be about 0.2 mm thick and 40 mm long, while those for surface layers of three layer board are usually about 0.12 mm thick and 10 mm long and about 24 mm long and 0.5 mm wide for the core.

Yield of finished product is about ⅓ of the initial wet weight of the timber. Thickness of the boards varies from 6 to 45 mm; density is approximately 700 kg/m³ for the thinner boards and about 520 kg/m³ for the thicker ones.

Credit is given to the Food and Agriculture Organization of the United Nations for permission to present these highlights from a paper presented at the International Consultation on Insulation Board, Hardboard and Particle Board, held at Geneva, Switzerland, from January 21 to February 5, 1957.

• Charles J. Short, formerly manager of the Vancouver, B. C. plant of Evans Products Co., has been elected a vice president.



JEDDELOH 28-inch "Sweed" cant gang installed in Horse Creek Lumber Co.'s Montague, Calif. sawmill doubled production and also extended the range of logs which can be processed economically.

Mill Revamps for Gangsaw

HORSE CREEK LUMBER CO. practically doubled production at its Montague, Calif., sawmill last fall (1956) by adding a 28-in. Jeddeloh cant gang. As a result of this addition the double circular headrig now cuts primarily for cants, thus leaving the final processing into 6/4 and 7/4 stock for the gang. Besides increasing the cut to 65-70M per day (one shift), this conversion extended the scope of economical processing to small diameter logs which have become an increasingly important factor in the area.

Logs of around 12-in. diameter, and smaller, are readied for the gang by facing but one side at the headrig. Other logs are converted into cants, the headrig primarily taking off 6/4 and 7/ flitches in the process.

The main roll casing handling stock from the headrig delivers to two points. Everything thicker than 8/4 is engaged by a fixed-position shear and thus shunted off the rolls onto a transfer leading to the gang infeed rolls. Eight-quarter and thinner stock passes beneath the shear and remains on the rolls to be discharged onto a transfer. This transfer extends across back end of mill, transporting lumber from the gang outfeed rolls to the edger which sets at the extereme back corner of the sawmill.

The edger discharges to a roll casing taking lumber back toward front of the mill, delivering to transfer leading beneath the main roll casing to the green chain. The latter remains in the same place it was before extending back end of the mill to accommodate the gang, the relocated edger, transfer and the long roll casing.

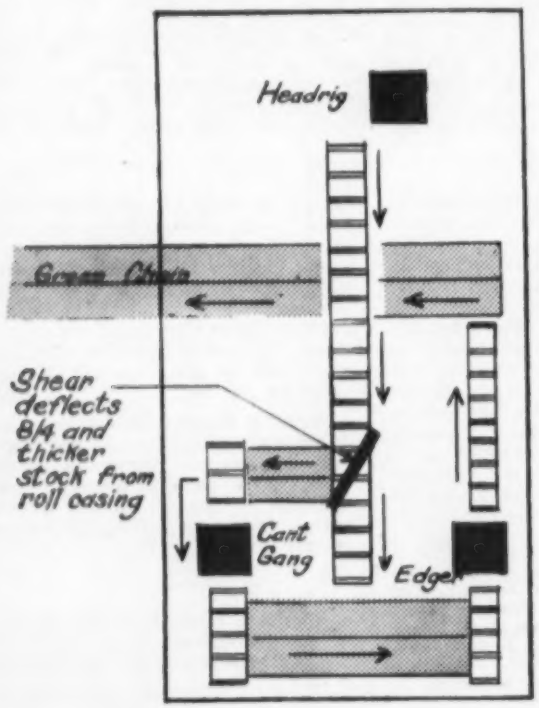


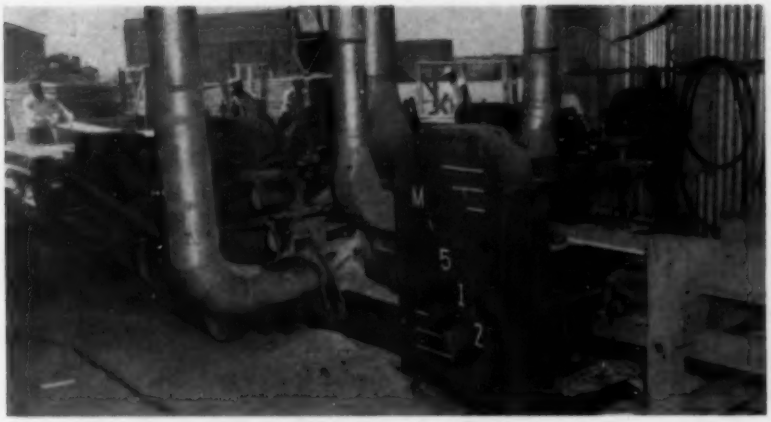
DIAGRAM which indicates new lumber flow adopted by Horse Creek Lumber Co., Montague, Calif. since Jeddeloh cant gang was added.

Dealers Retail Tile

• Forestone, the fissured acoustical tile manufactured by Simpson Logging Co., is now available through lumber dealers. It is now made tongue-and-groove and flanged.

The Forestone being handled by lumber dealers is made of woodfiber 9/16" thick and cut into 12" x 24" tiles that are center scored to simulate 12" x 12" tiles.

The edges are tongue-and-groove and have an extended flange for hidden nailing or stapling.



SHOWN ABOVE, new Newman M-512 planer and matcher has 10-knife heads. Recently installed near Newman 512 8-knife unit, both produce 150,000 to 160,000 bd. ft. in 8 hrs. Right photo, shavings from planer operation go to fuel house or burner by Wheeler & Reeder Type 70 blower.

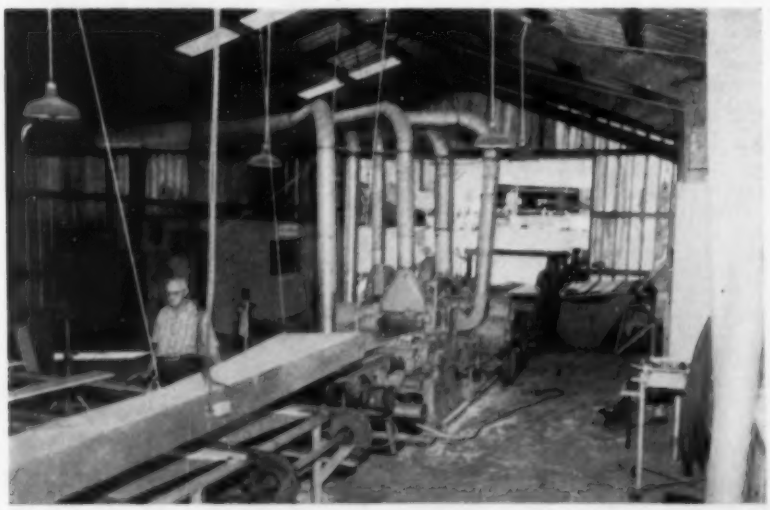
Arizona Firm Adds Second Planer for Surfacing Lumber

• Production of surfaced lumber has been more than doubled on a one-shift basis at the Nagel Lumber & Timber Co. operation at Winslow, Ariz. With a new Newman M-512 planer and matcher added to the older Newman 512 machine, the plant yields about 165,000 board feet in eight hours. The new machine has 10-knife heads and will surface 90,000 feet of random stock per day. A Wheeler & Reeder Type 70 blower sends the shavings to either the fuel house or the burner. Last year the firm produced close to 25 million board feet.

New Colorado Planing Mill Increases Production

• The new planer operation of Stanley J. Weidman, Inc., Durango, Colorado, is housed in a 36x70 foot Butler steel building, equipped with plastic skylights. It surfaces and trims 75,000 board feet of 4/4 Englemann spruce per shift. Equipment includes a Yates-American A-62 10-knife planer, West-PineLite grading light, Williams hammer hog and A. E. Boyd Equipment Co. conveyors.

BUTLER STEEL building housing new planing mill is 36 x 70 feet. Wood residue produces steam.

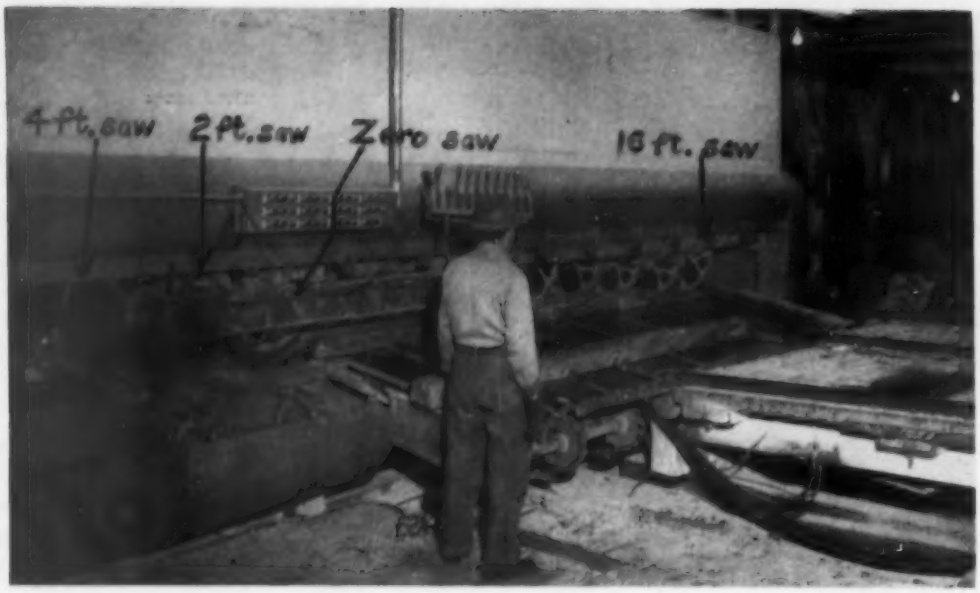


GRADER, left, has signal control on stand behind him to warn planer feeder to stop when necessary. Grading light is WestPineLite. Planer is Yates-American A-62, 10 knife machine.

The firm has increased the production of its sawmill, since described in the March 1955 issue of *The Timberman*. It is now cutting 55,000 feet per day of small logs. Part of the improvement program was the installation of a 10-inch steam shotgun in place of an eight inch unit and an increase in steam production.

Some of the fuel for the steam plant comes from trims and other residues from the new planing mill. After the surfaced lumber has passed over the grading table and gone through the under-type table trimmer, it slides down five steel bars to the sorting table. Beneath the bars is a trough with a belt in the bottom leading to a hammer log. Trims automatically go through the hog, and the wood particles are blown to the fuel house.

• Felix L. LaMar has been appointed vice president and director of sales for Holbrook Lumber Company, Springfield, Mass., effective June 1.



RALPH L. SMITH Lumber Co., Castella (Calif.) Div., installs model 88M Irvington 20-foot trimmer suitably modified to space limitations of the sawmill. Note two saws at left of zero saw for processing 18 and 20 foot stock.

Take Off Two Saws — Add Two

• Space limitations which prevented installing a conventional gang trimmer at Ralph L. Smith Lumber Company's Castella (Calif.) division sawmill were overcome by putting in a standard machine modified and adapted to these space restrictions.

PROBLEM: How to place a trimmer in the mill, so constructed that installing a conventional trimmer would have been costly in time and money.

SOLUTION: A left-hand model 88M random length, automatic-selective Irvington end trimmer, with capacity for 20-ft. stock. It differs essentially from the regular 20-ft. machines of this make in that "minus two-ft." and "minus four-ft." saws (for making 18 and 20-ft. cuts) set on the opposite side of the zero saw than do all the other saws. This can be visualized by picturing the installation as a 16-ft. trimmer, with zero saw at the left, plus two additional saws to the left of zero, says Sawmill Supt. E. W. Swift.

Stock from the edger moves onto the chain transfer leading to trimmer so the lead ends line up on the zero saw. Everything finishing out up to and including 16 feet in length goes through the trimmer in conventional manner. In case of 18 or 20-ft. stock, the operator (stationed at side of the feed chain leading to the zero saw) moves the stock longitudinally so it lines up with the appropriate saws. In case of 20-ft. stock, the four-ft. saw trims the "zero" end and the 16-ft. saw processes the other end.

All eleven trimmer saws are motorized, the zero and 16-ft. components driven with 7½-hp. motors and the rest with five-hp. motors. The motorized saw units are equipped with hydraulic shock absorbers for rapid, shockless return from lifted position.

How to Saw Frozen Logs

By
ALBERT ANDERSON
Evergreen, Colo.

• Here in Colorado the mills have to saw a lot of frozen logs. We have been sawing some frozen lodgepole pine and Engleman spruce that is as hard as glass, yet my saws are running without any trouble. When we are sawing frozen logs I try to run the saws without lead and hold the saw into the log with the quick pin on the quick. I am using a B&F pattern Simonds 8 guage 50-inch saw. You have to have good shoulders on your saw holders. I like solid tooth saws but here in Colorado they use mostly inserted tooth saws as not too many men can handle solid tooth saws which according to my way of thinking are harder to run in sawing frozen timber.

I have been sawing for twenty-six years and find the above to be true. I have been caring for saws to cut frozen timber for all these years. I came from International Falls, Minn.

I try to run as little hook as possible in my teeth when fitting saws for sawing frozen logs. I find that the saws run best and dish less when running at about 500 to 600 RPM. I have worked in mills where they run the saws at 700 RPM or better. And they had no luck sawing frozen logs. Personally I think about 500 RPM is about right.

I would like to mention a device I have made which saves a lot of lifting when changing saws. The accompanying sketch will give an idea of the device. It consists of a cable, a sheave pulley, and two pieces of three inch belting with two slots to slip over the saw teeth. I have the cable running straight back from the track. That way you can leave the carriage on either end of the track and can pull the saw to either end as best suits your needs. I usually tie a piece of rope with a half twist on the hook and a slip knot. That way I can let the saw down when I get to the mandrel shaft just right for the eye on the saw. Then I push the saw unto the mandrel. No lifting is required.

MOBILE air-electric sawmill is used by Shaver Lake Forest Industries, Inc. to produce 10,000 board feet daily with four men. Carriage has predetermined, remote controls.

EDGER is between carriage tracks under carriage. Sawdust goes to trailer at right.

Mill Hits Road in Two Hours

• Only two hours are required to get a new mobile sawmill on the road, according to the men working with the unit near Shaver Lake, Calif. The "Bachmobile" is used by Shaver Lake Forest Industries, Inc., to produce lumber from smaller logs in the woods. It was designed for six men, but four men have been cutting a little more than 10,000 board feet per day with the machine.

Mounted on a four-wheel, rubber-tired trailer, the unit is nine feet ten inches wide and 35 feet long. Screw jacks are used to support the corners of the steel frame when the mill is in use. A portable live deck for the logs is being made, and a 4-wheel trailer is planned to serve as a green chain.

Initially, a Gerlinger lift truck has been bringing the logs to skids leading to the carriage. Air operated loading arms put the logs on a 3-block carriage, which has a 31½-inch opening. The air-electric carriage has remote controlled predetermined setworks. The sawyer is positioned on a platform near the single circular saw, facing the side of the carriage.

Power is supplied by a Cummins 200-hp "Pancake" diesel engine located under the carriage track. V-belt and chain drives are used. Besides an electric generator, the operation includes an Allis-Chalmers powered, Gardner-Denver air compressor. The latter is mounted on a two-wheel trailer and has two cylinders, 7⅞ and 4 inches in diameter with a 5-inch stroke.

Double-disc frictions are used in the feed works, which moves the carriage at 240 lineal feet per minute. Logs up to 20 feet long are cut. Most of them are about 18 inches in diameter. They are turned on the carriage with an air-operated hook-type turner.

An unusual feature of the mill is the edger, which is located under the carriage track, near the offbearing end. Boards are dropped from the carriage onto a set of dead rolls. The edgerman, positioned at the end of the mill, on the ground, drops the boards from the rolls down between the carriage tracks, when the carriage is at the opposite end. The stock is then fed back under the carriage, through a 3-saw edger. All of the saws are movable in the 26-inch edger.

Sawdust from the mill is blown into a two-wheel trailer. The trailer is used with a pick-up truck, which hauls off slabs and edgings. Improved waste disposal methods are being developed.

All lumber goes through the edger. It is discharged from the mill under the opposite end of the carriage truck. Until the mobile green chain is developed, the lumber will be dropped onto some skids at the end of the mill. The offbearer sorts the stock and piles it onto jacks, from which it is removed by a truck. Rough trimming is done with a bow-type chain saw.

E. B. Yancy is manager of the operation, which cuts smaller logs, not economically suited for hauling to larger, permanent sawmills. The mill was built by Eugene Truck & Machine Co., Eugene, Ore.

DISCHARGE end of 35-foot Bachmobile mill sends boards onto sorting skids. Screw jacks support corners of steel mill frame.

GERLINGER lift truck supplies logs to mobile mill. Lumber, discharged from the log deck end, is piled on jacks for truck.

Dry Kiln Operators Review Progress Made In Seasoning, Point to New Techniques

HOST TO DRY KILN clubs convening in Eugene, Ore. was West Coast Kiln Club. These men arranged program. Front row, from left: Lawrence H. Wood, Hult Lumber Co., Junction City, Ore.; Loren Benjamin, Simpson Redwood Co., Arcata, Calif.; A. C. Knauss, Pac. NW Forest Exp. Stat., Portland, Ore. Middle row, from left: Jack R. Pfeiffer, Leif Espenas, Ore. Forest Products Lab., Corvallis, Ore.; Doyle Van Deventer, Broughton Lumber Co., Underwood, Wash. Back row, from left: Ed Knight, Western Pine Assn., Portland, Ore.; E. L. Richey, Eugene Planing Mill, Eugene, Oregon.

NON-UNIFORM AIR yard spacing, effects of log storage on kiln drying and new techniques in air drying lumber were some of the program highlights at the annual session of the Western Dry Kiln Clubs, held in Eugene, Ore. on May 15-17. The West Coast Dry Kiln Club was host. Program chairmen were A. C. Knauss, Pacific Northwest Forest Experiment Station, Portland, Ore., and Gordon C. Wilkinson, Lumber Manufacturers, Inc., Portland.

Program highlights follow:

Study Shows Stickers Cost Money

(Presented by Washington-Idaho-Montana Kiln Club)

A study of lumber stickering costs made by 12 members of this kiln club showed:

- Select grades appear enough better than economic grades to warrant their use in spite of greater material costs. Although average sticker costs per M bd. ft. of lumber dried appear to be only slightly higher, down time incurred by greater breakage rate would favor use of materials selected for optimum service (select grade). Loss by crook and twist in low-grade stickers is not nearly so serious as breakage due to cross grain.
- Thicker stickers give longer service life and cost less in the long run.
- Sticker costs per M bd. ft. of lumber dried are nearly the same with automatic compared to manual stickering, both in stacking and unstacking procedures.

For short stickers:

- Select grades are again the better value over common types.
- Wide stickers increase sticker life and thus reduce cost per M bd. ft. of lumber dried.
- Data is lacking for comparison of Automatic and Manual sticker laying with short stickers.

Costs of producing stickers was indicated as $157 per M bd. ft. for fir and larch selects and $65 per M bd. ft. for mixed species, common grades trims, edgings salvage and white fir #5 common.

For 96 to 108 inch stickers, 115,717 stickers were discarded in drying 158.7 million bd. ft. of lumber, making average cost per sticker about 20 cents and average sticker cost per M bd. ft. of lumber dried about ten cents.

For 40 to 54 inch lumber, 45,111 stickers were discarded in drying 15.5 million bd. ft. of lumber, making average cost per sticker about six cents and average sticker cost per M bd. ft. of lumber dried about 13 cents.

Of stickers discarded, 9 per cent were warped, 17.4 per cent were split or splintered, 25.2 per cent had broken ends and 56.5 per cent were broken in the middle.

Automatic sticker placement showed 41.4 per cent loss due to broken ends and 29.4 per cent broken at center. Manual placement showed 78.3 per cent broken at the center and about 11 per cent each for split and splintered and for broken ends.

Sprinkling Lumber in Green Yard

(J. Herbert Bate Co., Wallowa, Ore.)

Installation of an overhead sprinkler system costing $306 on green lumber in the yard (two charges of 4/4 fir and larch Moulding and Better, one sprinkled and one not sprinkled) showed:

- Lumber not put into the sprinkler had 16½ per cent season check.
- Lumber that had been put into the sprinkler prior to kiln drying had only 5.8 per cent season check.

Pond Storage of Bundled Logs

(The McCloud River Lumber Co., McCloud, Calif.)

The company started storing logs in bundles in the pond in late 1954. A test was made in cooperation with the Western Pine Association, whereby a selected number of log bundles

PANEL ON non-uniform air yard spacing in redwood region. From left: P. Johnson, Calif. Redwood Association, Eureka; Sam Brown, Simpson Redwood Company, Arcata; J. Combs, Holmes Eureka Lumber Co., Eureka; chairman, A. C. Knauss, Pacific Northwest Forest Experiment Station, Portland, Oregon; W. L. Benjamin, Simpson Redwood Company, Arcata, California.

New Officers West Coast Dry Kiln Club

PRESIDENT: Doyle Van Deventer, Broughton Lumber Co., Underwood, Wash.

VICE-PRES.: Robert McEvers, Nicolai Door Co., Portland, Ore.

SEC.-TREAS.: Elvin Ackley, Simpson Logging Co., Shelton, Wash.

The 1958 meeting will be held either in Yakima or Spokane, Wash.

had sprinklers on the logs above pond level. (See March 22, 1957 issue, THE LUMBERMAN.

When test logs were sawed into lumber, following results were obtained:

The total footage surfaced and graded was 236,453 feet, of which boards totaling 17,064 feet or 7.22 per cent were degraded or trimmed for some of the defects. Itemized: blue stain accounted for 0.06 per cent; kiln brown stain, 1.31 per cent; log check, 1.49 per cent; end check, 3.50 per cent; surface check, 0.86 per cent.

Blue stain was absent in sprinkled log lumber and amounted to only 145 feet out of 118,048 feet of unsprinkled log lumber. Blue stain spots on logs due to infection after loss of bark were eliminated in slabbing and edging. Blue stain in lumber apparently was in the log before entering the pond.

Top sprinkled log lumber shows a total defect of 0.69 per cent compared to 2.04 per cent for unsprinkled log lumber, or only 33 per cent of the latter. Bottom sprinkled log lumber shows a total defect of 4.80 per cent compared with 6.88 per cent of the unsprinkled log lumber or 70 per cent of the latter. Total defect of the sprinkled log lumber amounts to 62 per cent of the defect of the unsprinkled log lumber or a saving of 3.42 per cent of the total footage. (See accompanying table).

Non-Uniform Air Yard Spacing
(Redwood Seasoning Club)

Producing mills in the Redwood Region kiln dry between 250 and 300 million board feet of redwood annually. Of this total, approximately 70 per cent is heavy or sinker lumber with an excess of 150 per cent moisture content. This tremendous amount of water that has to be removed from lumber costs mills thousands of dollars.

Air seasoning produces a final dry lumber product at a lower over-all cost than can be obtained by kiln drying redwood from the green condition. Air seasoning permits a larger volume of lumber to be dried with a minimum fixed investment in a kiln plant.

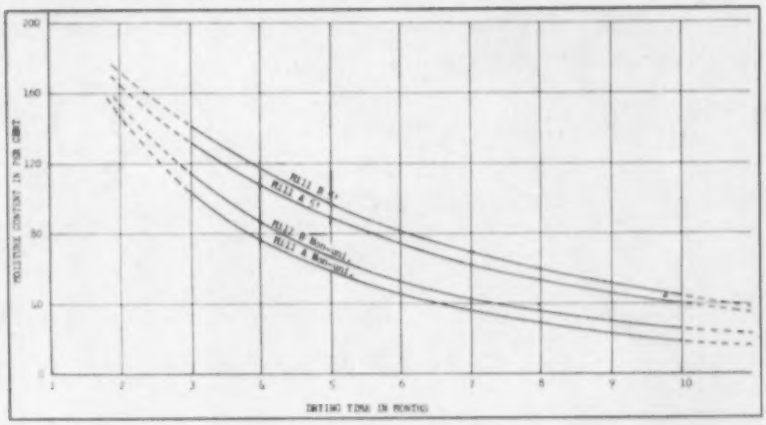
Several methods of air yard spacing were tried in this test in the Humboldt Bay area. These were uniform 2 feet, 3½ feet and 5 feet spacings and later an experiment was conducted using a uniform 4 feet, 6 feet and 8 feet spacing. Findings of these experiments were that wider spacings definitely give a more uniformly air-seasoned product to kiln dry at less cost per M per acre per year. Non-uniform pile spacing, wherein the spacing at the center of the pile was increased with a gradual decrease in spacing toward the main alley, seemed to offer definite possibilities.

Non-uniform air yard spacing is staggered separation of lumber piles across a block. By spacing piles near the alleys closer together and opening up center piles across the block, amount of moisture loss will be controlled on outside and increased through the center. Net result is a more uniform pattern of moisture loss at a faster rate. If moisture loss is uniform and segregation right, kiln charge coming from this block will be as uniform in moisture content as can be obtained by air drying.

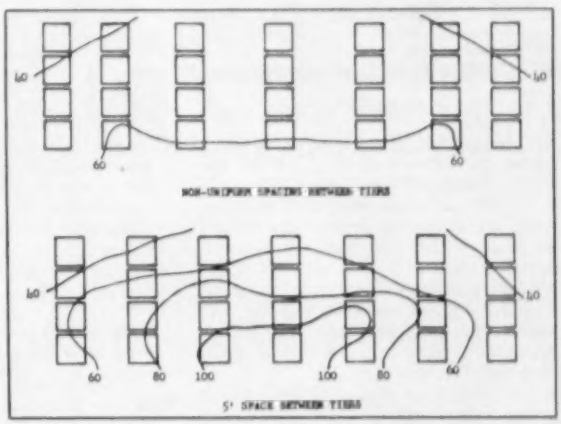
Air yard spacing in areas that have active drying periods would be less than those used in the Humboldt Bay area if the species being dryed is subject to defects caused by fast air yard seasoning. Air yards in areas af active summer drying and inactive winter drying can be made flexible with the use of portable pile bottoms.

Non-uniform air yard spacing is achieving three important results in

Non-Uniform Spacing of Redwood Piles Shows Advantages



CURVES SHOW moisture content to which 1-in. sinker redwood lumber will dry as a function of time it is in drying yard in blocks with 5 foot uniform and non-uniform pile spacings.



RELATIVE uniformity of drying 1-in. sinker redwood on 5-ft. uniform and non-uniform spacing based on initial moisture content of 200% and 6 months in the drying yard. (Figures in per cent moisture content).

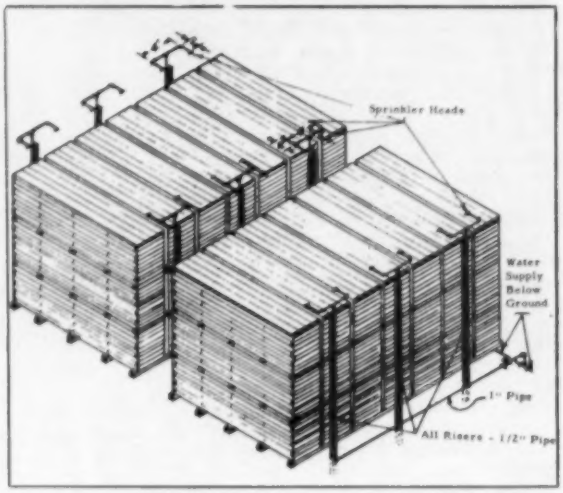
Comparison of Sprinkled Log Lumber and Unsprinkled Log Lumber
(The McCloud River Lumber Co., McCloud, California)

	SPRINKLED 118,405 fbm 100%				UNSPRINKLED 118,048 fbm 100%			
	Top logs 15,396 fbm		Bottom logs 103,009 fbm		Top logs 21,542 fbm		Bottom logs 96,506 fbm	
Defect	13%		87%		18.2%		81.8%	
Blue stain	0	0	0	0	71	0.06%	74	0.06%
Kiln stain	131	0.11%	905	0.76	407	0.34	1,657	1.40
Log check	200	0.17	894	0.76	914	0.77	1,497	1.28
End check	358	0.30	2,988	2.52	786	0.66	4,146	3.51
Surface check	129	0.11	965	0.77	246	0.21	746	0.63
Totals	818	0.69	5,702	4.80	2,424	2.04	8,120	6.88
Group Total	6,520		5.50%		10,544		8.92%	
Saving by sprinkling	3.42%							

Blower Drying of Lumber Lowers Moisture

OREGON FOREST Products Lab. tried blower drying of lumber experimentally. Shown is piling method for initial charge 75M fbm of 2" West Coast hemlock lumber. This is one of two 5', 2-blade propeller fans with 7½ hp. motor on skids between piles.

Sprinkling Green Lumber Minimizes Checks



SPRINKLER SYSTEM used by J. Herbert Bate Co., Wallowa, Ore. Total cost was $306.11. Hudson Spray Gun was used as spray head, gave very fine mist. Lumber tested by sprinkling showed 5.8 per cent season check against 16.5 per cent for non-sprinkled lumber.

the Humboldt Bay, California area, based on studies carried on at two mills. These are:

- Rapid air seasoning with a minimum of degrade. Survey data show at least a 20 per cent increase in drying rate.
- More economical use of air yard. Volume of lumber that can be seasoned per acre per year will be increased or same volume can be dried in a smaller space.
- Uniformity of drying across a block giving kiln charges of uniform entering moisture contents that dry faster and require less equalization time.

Kiln Drying Costs
(Ralph L. Smith Lumber Co., Anderson, Calif.)

How much does it cost? Why?

Ralph L. Smith answers these questions with a system with a monthly report on kiln output and lost time plus one on species, thickness and grade with footage and percentage of each.

The dry kiln operating report contains a breakdown of labor costs, material costs and prorate charges. Overhead expense is then added to other charges to give the complete kiln cost.

An analysis sheet was worked out to give the cost per kiln hour and the cost of each thickness, grade and species. Figures required for this include footage, estimated footage per charge and estimated number of hours per charge. From these three items is obtained the estimated number of charges and total kiln operating hours. Average time taken to pull and fill each charge is multiplied by number of runs to obtain down time and by adding down time to operating hours the total kiln hours are accounted for. Grand total cost for all grades, thickness and species multiplied by total hours accounted for (individual item) and divided by grand total kiln hours accounted for gives allocation of cost based on kiln hours. By dividing item cost by item footage cost per thousand feet of that particular item is obtained.

Drying 4x8 inch DF Decking
(West Coast Dry Kiln Club)

What schedule is recommended for drying Douglas fir, three inches and thicker?

Preliminary work done on drying 4x8 inch decking and beams indicates the following:

- Temperatures in the range of 130 to 200 degrees F with constant EMC conditions of 15 per cent appeared to have little effect on checking.
- The kiln schedule consisting of an initial dry-bulb temperature of 175 F and EMC conditions of 12 per cent until the material reached 20 per cent, after which the EMC conditions were lowered to 6 per cent, appeared to give best drying results in shortest possible time. While these results are not considered to be ideal for lessening checking, a great deal depends on how serious the so-called degrade and large checks are considered to be. Furthermore, it is not likely that an entire kiln charge in a commercial operation would consist of flat-grain material, as in wood studied, and consequently, less degrade could be expected.
- Pretreatment with a salt such as the Morton Lumber Cure reduced amount and extent of checking.
- There was no honeycomb evident in any of the kiln-dried pieces, except on ends of freshly cut samples that were left in a heated room.

Degrade in Kiln Drying Lumber
(Anaconda Copper Company, Bonner, Mont.)

A seasoning degrade study was made by Montana State University and Anaconda Copper Co., Lumber Dept. It included: 4/4xR.W.x16' ponderosa pine, heart, common; 4/4xR.W.x16' ponderosa pine, sap, common; 4/4xR.W.x16' ponderosa pine, selects and shop; 4/4xR.W.x16' Douglas fir and western larch selects; 5/4xR.W.x16' ponderosa pine shop.

Results showed an average loss of $13.70 per M bd. ft. in value, segregated as follows:

- $1.61 for natural defects
- $0.20 for seasoning defects
- $3.60 for manufacturing defects (sawmill)
- $1.96 for manfacturing defects (planing mill)
- $2.63 for combination of manufacturing and seasoning defects
- $2.68 for combination of manufacturing, seasoning and natural defects
- $0.94 for logging damage
- $0.08 for yard storage

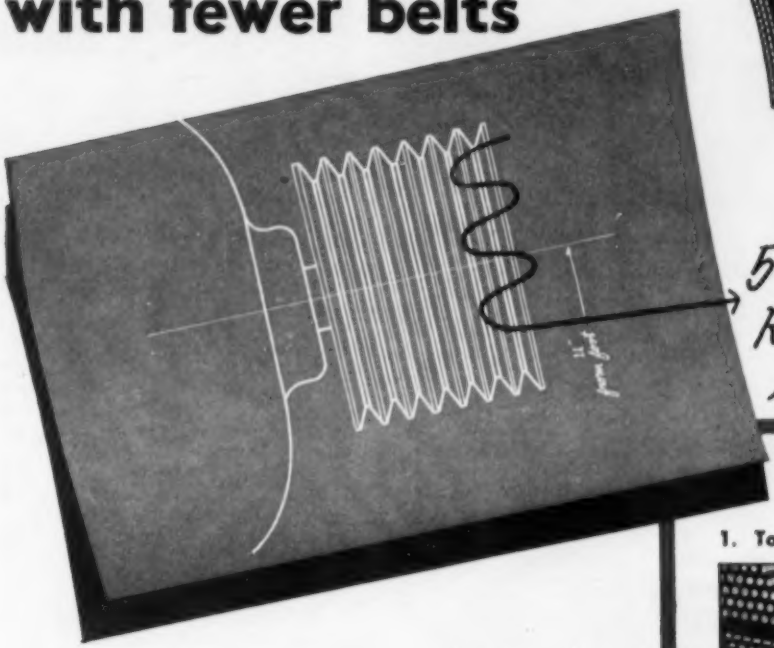
A total of 5936 bd. ft. was degraded by knot holes, loose knots, etc., as compared to 3064 bd. ft., or slightly over one-half, directly attributable to the sawmill. The loss in value, however, is nearly reversed. Sawmill losses amounted to $3.60 per M bd. ft. as compared to $2.68 per M bd. ft. credited directly to losses in which knots were the main factor. Most of loss in sawmill was caused by thin or wavy sawn boards and was the main cause of degrade in the select and shop lumber.

There is a definite relationship between degrade by "cup" and "roller check" and width of the boards.

(*Continued on page* 104)

Cut sheave width and weight...

get same horsepower with fewer belts



5 Gates Super Vulco Ropes do the work of 7 standard V-belts

Where space is limited and weight a factor, design your drive with this important fact in mind:

5 Gates Super Vulco Ropes do the work of 7 standard V-belts

That's because a Gates Super Vulco Rope has 40% more horsepower capacity — delivers more horsepower per dollar invested than any standard V-belt drive. Sheaves with fewer grooves cost less . . . weigh less . . . take less room. Drive design is invariably improved.

A wealth of drive data is quickly available to you. Simply call your nearby Gates distributor for a Gates V-belt specialist. Stocks carried in industrial centers around the world.

The Gates Rubber Company
Denver, Colorado

The Mark of Gates Specialized Research

No other V-Belt has ALL these advantages

1. Tough, resilient Tensile Cords

Super strong resilient tensile cords provide 40% greater horsepower capacity . . . easily absorb heavy shock loads . . . reduce number of belts required . . . save weight and space.

2. Concave Sidewalls (U.S. Pat. 1813698)

Concave sides (Fig. 1) increase belt life. As belt bends, concave sidewalls become straight, making uniform contact with sheave groove (Fig. 1-A). Uniform contact means less wear on sides of belt . . . far longer belt life.

3. Flex-Weave Cover (U.S. Pat. 2519590)

A Gates exclusive: provides greater flexibility with far less stress on fabric. Cover wears longer . . . increases belt life . . . more power available to driven machine.

4. High Electrical Conductivity

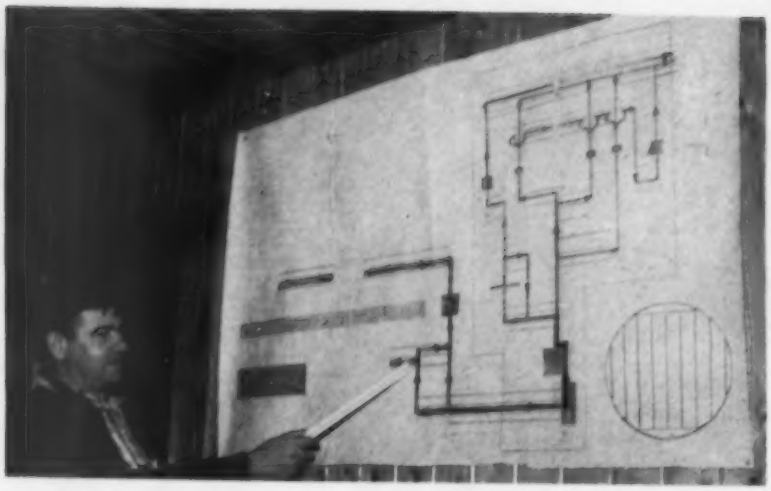
Built into Gates Super Vulco Ropes for safer drives (in explosive atmospheres).

5. Oil, Heat, Weather Resistant

Special rubber compounds make Super Vulco Ropes highly resistant to heat, oil, and prolonged exposure to weather.

TPA 248

Gates Super VULCO ROPE Drives



LUMBER FLOW in new sawmill of Ozan Lbr. Co., Prescott, Ark. is indicated on chart by vice-pres. W. J. Oates. Plans include quick headrig breakdown, handling of cants by three gang mills and horizontal resaw, plus 2 edgers. Equipment is mostly Soderhamn and Filer & Stowell.

Ozan Plans Three Gang Mills

MILL BUILDING is all-steel construction with galvanized metal siding. Headrig end of mill is at right. All production units will be on second floor level. Barker in left foreground.

WORK ON THE NEW sawmill of Ozan Lumber Co. at Prescott, Arkansas is progressing, with some delays due to prolonged rainy weather this spring. Completion date is expected this fall.

According to W. J. Oates, vice-president, the mill is shooting at a production goal of 12,000 bd. ft. per man hour. It will gain this high production on the premise that the headrig unit will be used primarily for quick breakdown of logs into cants—six inch, eight inch and also 12 inch, where possible as dictated by log size. Logs generally will average only 40 bd. ft. in 16 foot lengths.

The breakdown unit will be a Filer and Stowell eight foot single cut bandsaw, fed by a F&S three block carriage, shotgun feed. The block setter will have remote control. Four logs per minute across the headrig is the production goal.

From the headrig slab cuts will go to a F&S eight foot horizontal resaw, with a merry-go-round system. Output of this feeds to one of two Soderhamn edgers and from there out on the line for trimming and sorting by a Bovay sorter, with 26 sorts.

Cants from the headrig go to one of three in-line Soderhamn 26 inch gang mills, depending on cant size. Six inch cants go to one, eight inch to the second and 12 inch to the third. Output of each gang is either direct to the trimmer feed table or, if required, to the second Soderhamn edger, which handles output of all three gangs and feeds to the trimmer feed table and Bovay sorter. This lumber flow is indicated in the accompanying photograph.

Pine in 8/4 size will be sorted in 6 to 16 foot lengths, as will 4/4 pine and gum and oak. There will be one bay for four foot pine.

Other production units in the sawmill will include a 26 inch Cambio barker, with a Soderhamn metal detector, a Soderhamn HF60 chipper and Soderhamn screen.

Research Center Employs Glulam

CORNER VIEW of forest research center shows patented rigid frame connection where glulam beams fit into tapered laminated legs. Building contains 40,000 ft. floor space for research.

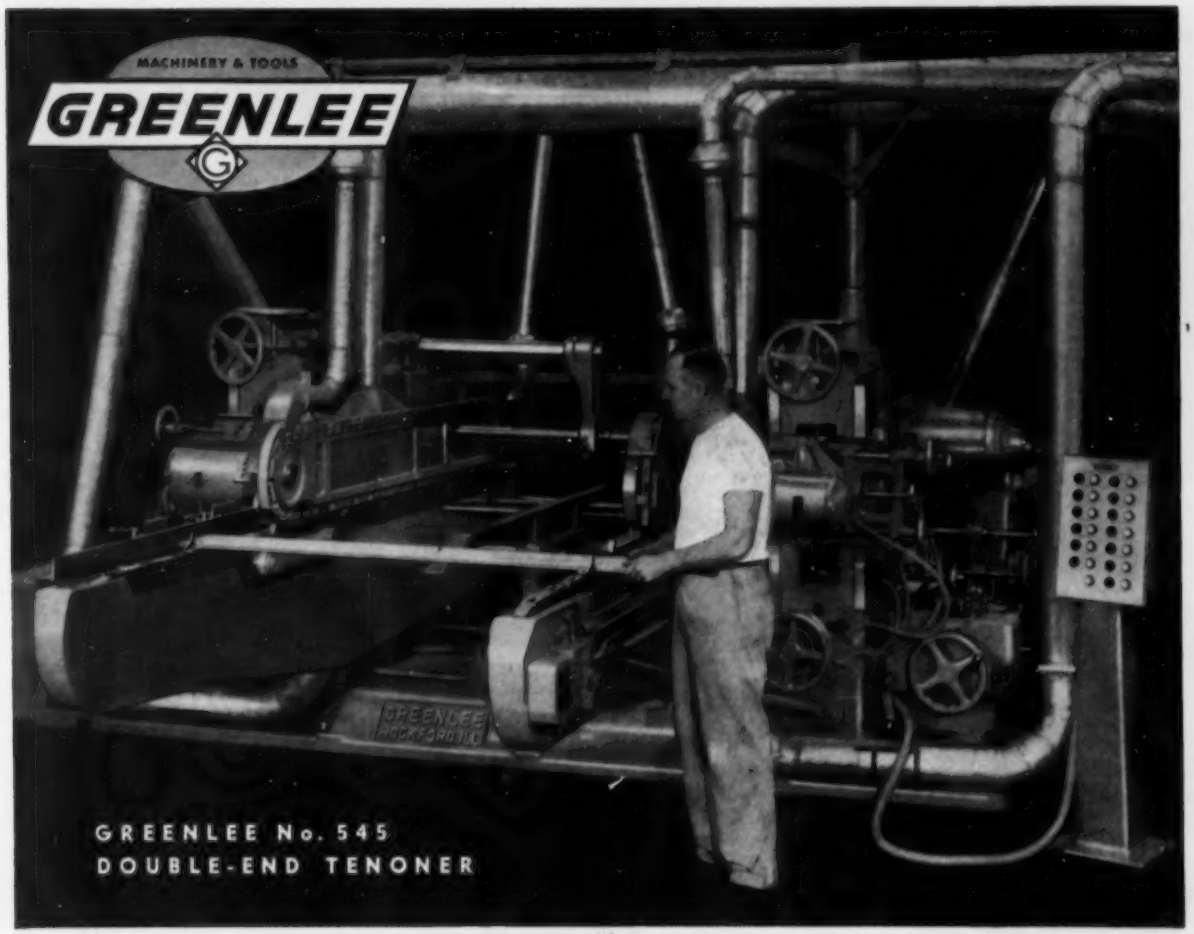
THE NEW $550,000 Oregon Forest Research Center at Corvallis, Ore. combines in its basic designs some of the newest concepts for the use of glulam structures.

The U-shaped building to be completed in September, has 40,000 sq. ft. of floor space which will house the state's two main forest research activities, the Oregon Forest Products Laboratory and the Oregon forest land research program.

Graceful curved glulam beams 56 feet in length form the framework and the roof support for the entire structure. The beams set in tapered glulam wooden legs which form rigid frames and are spaced at 16-foot intervals.

Working wings of the building, which will house the two research

(*Continued on page* 103)



Has Returned 100% On The Investment In Less Than One Year

MACHINERY FOR
PLANING
SHAPING
TENONING
MORTISING
BORING
AND SAWING

This is a matter of record for all to see (plant names and case histories on request).

Phenomenal, yes . . . but not surprising, because this versatile machine can perform many cost-cutting operations in one pass . . . dadoing, scoring, dovetailing, notching, relishing, sill-horning, irregular shaping, etc.

It works to close tolerances, too . . . a few thousandths if required . . . eliminates costly "hand fitting". Well-known for its low-cost, long-lived, trouble-free operation.

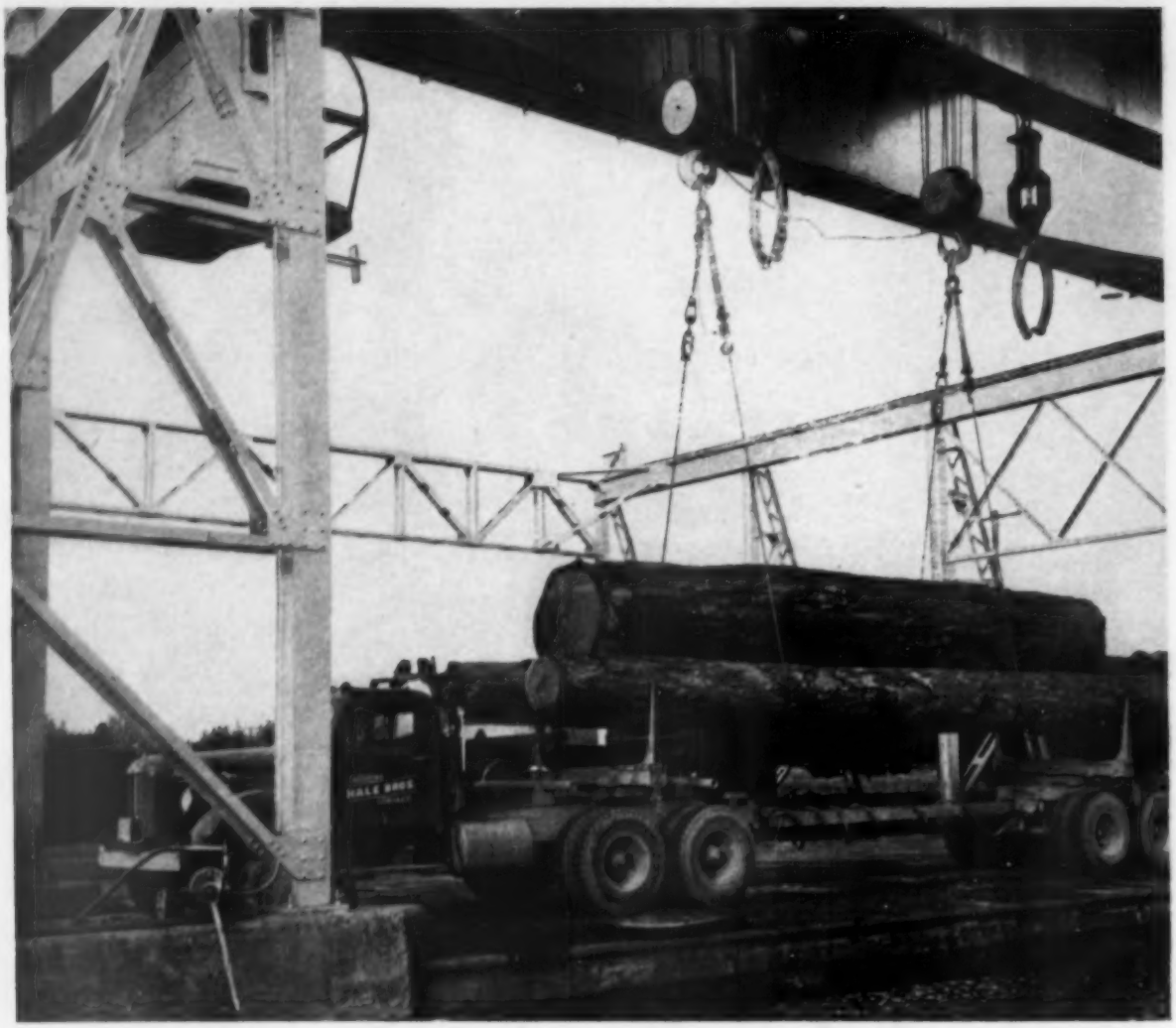
Write for complete information on the Greenlee Double-End Tenoner . . . or better, let us arrange for a demonstration. You'll be amazed at the production possibilities it offers.

Investigate The Added Profit Possibilities Offered By Greenlee Machines!

WOODWORKING MACHINERY MANUFACTURERS ASSOCIATION WMMA

GREENLEE BROS. & CO.

1866 TWENTY-FIRST AVENUE
ROCKFORD, ILL.



"T5X...proved itself the finest"

Gordon H. Hale, president; Don Crane, master mechanic
Hale Brothers Logging Co., Springfield, Oregon

"I could hardly credit all I'd heard about T5X's amazing performance until I tore down a few engines that had been using it exclusively... *then I was sold,*" reports Don Crane, master mechanic for Hale Brothers Logging Co.

"Never do you see cleaner engines, or engines with less wear at the normal overhaul time than those in our 16 Mack log trucks. We operate these rigs on rugged schedules, too... two 140-mile round trips daily, or an average of 100,000 miles per year on every unit. Our experience with T5X dates back about 10 years now, and believe me, that purple oil has really proved itself *the finest* many times over."

Everywhere in the West the users of T5X report in equally glowing terms on the results obtained with this *amazing* purple motor oil. Try T5X yourself this season and you'll see why.

UNION OIL COMPANY 76
OF CALIFORNIA

Los Angeles: *Union Oil Bldg.* • ***New York:*** *45 Rockefeller Plaza* • ***Chicago:*** *1612 Bankers Bldg.* • ***Philadelphia:*** *Eastwick Ave. & Edgewood St.*
Dallas: *313 Fidelity Union Life Bldg.* • ***Kansas City, Mo.:*** *612 W. 47th St.* • ***New Orleans:*** *644 Nat'l Bank of Commerce Bldg.* • ***Boston:*** *214 Harvard Ave.*

Plywood Department

JOSEPH L. LEITZINGER is the new Technical Information Specialist.

DeFOREST MATTESON has joined DFPA Engineering Services Editor in Tacoma.

DANIEL H. BROWN, recently appointed to staff of DFPA as Engineer-Analyst.

WALTER BOYDEN is newly appointed Testing Engineer at Research Laboratory.

DFPA Engineering-Research Laboratory Adds Four to Staff

• Appointments have been made to four newly created positions on the staff of the Douglas Fir Plywood Association's Engineering-Research Laboratory in Tacoma, Wash.

The move is part of a major expansion of the engineering research services performed by the laboratory under the direction of David Countryman, Chief, Engineering-Research.

Appointments include DeForest Matteson, Daniel H. Brown, Joseph L. Leitzinger, and Walter Boyden.

Matteson joins the laboratory staff as Engineering Services Editor.

Brown has been named Engineer-Analyst. His work will involve analysis of new problems and designs, including structural testing.

Leitzinger will be Technical Information Specialist. This position was created in order to meet the growing demands from technical and professional personnel for information on plywood applications and properties.

Boyden will serve as Testing Engineer. In this capacity he will conduct physical and mechanical tests on plywood and plywood structures required to appraise its performance.

Japan Plywood Firms Plan Public Relations

JAPANESE PLYWOOD manufacturers are planning a public relations program which they hope will deter legislation restricting imports of plywood into the U.S. from Japan.

According to word received from THE LUMBERMAN's correspondent in Tokyo, the following points are to be stressed:

- That Japan is importing far more value of American goods than the U. S. does Japanese goods.
- That plywood occupies a relatively small portion of the overall goods.
- That the Japanese door-sized plywood panel suitable for U. S. market has a unique merit of its own and has been accepted with great popularity, and that a suitable over all American substitute has not been found.
- That U. S. consumers of the Japanese plywood would suffer if imports were curtailed.

The number 1 item above is substantiated by facts given THE LUMBERMAN by the U. S. Department of Commerce. In 1956, Japan imported $1,068.9 million of goods from U. S. while exporting to the U. S. $554.5 million. In 1955, the figures were: Japanese imports from U. S., $775.9 million; Japanese exports to U. S., $458.9 million.

Of products exported to the U. S. in 1956, Japanese plywood and veneer are listed by Department of Commerce as valued at $35.8 million and non-coniferous lumber at $9.6 million. Plywood and veneer comprise about 6½% by value of the total imports into the U. S. from Japan. Other major items include clothing, $70.5 million; cotton fabrics, $29 million; raw silk, $28.2 million; toys, $38.2 million; and china, $21.5 million.

The U. S. major exports to Japan include raw cotton, $170.1 million; wheat, $76 million; coal, $72.8 million; soy beans, $62 million; industrial machinery, $35.1 million and chemical woodpulp, $10.8 million.

The Japan Plywood Exporters' Association late in April held a meeting of its members to discuss a one-year extension of their agreement to prohibit the export of low quality door-sized plywood to U. S. and Canada. The measure had been enforced for the past two years and expired on May 6. The renewal covers the period May 7, 1957, to May 6, 1958.

The item affected is the third and fourth grade of any variety of door-sized plywood in length between 80" and 83", 18-37" in width and between 3-4 mm. thick.

Research to Increase

• A substantial increase in research by a more fully integrated wood products industry was forecast in May by S. W. (Tony) Antoville, president, United States Plywood Corp. He made the prediction at the symposium on forest products which opened the dedication program for the Hugh P. Baker Wood Products Laboratory at the College of Forestry, State University of New York.

"If we have been able to make so much progress in wood products with the limited research of yesterday, it is inspiring to consider where today's new emphasis on research will lead", Mr. Antoville said. "Research men are the moulders of our future. I predict confidently that in our industry they will be furnished adequate tools, support and understanding to meet the challenges ahead."

Fuller utilization of forest products is resulting from the industry trend toward integrating different phases of wood processing, he noted, and this benefit will be one of the continuing research goals. Others will be the creation of new materials and combinations of materials based on wood.

DFPA Releases Booklets

• Two new booklets have been issued by the Douglas Fir Plywood Assn., Tacoma, Wash.

"Fir Plywood in Schools" is written for the school official and architect as an informational aid to specification of materials for school construction.

"Design with Fir Plywood is intended to serve as an informational aid to industrial designers, materials handling, packaging and plant engineers, architects and other specifiers of building and industrial materials.

DFPA Completes Reorganization

With a rearrangment of regional boundaries and plans for the addition of eight new field promotion representatives, the Douglas Fir Plywood Association has completed a year-long reorganization and expansion of its field promotion department, according to Joseph Weston, Field Promotion Director.

Under the reorganization, DFPA regional managers are now headquartered in the following cities: R. S. Williamson, New York; Paul Nystrom, Washington, D. C.; W. T. Robison, Atlanta; Herman Glover, Dallas; Darwin C. Boblet, Cleveland; W. D. Page, Chicago; Glenn Halme, Minneapolis-St. Paul; Richard E. Anderson, Los Angeles; Earl Pennington, San Francisco; and Stanley A. Taylor, Assistant Field Promotion Director, Tacoma.

The DFPA Field Promotion Department was established in 1938 to provide field level assistance to plywood producers, sellers, and users.

Michigan Tractor Logger

LICKS PROBLEM OF DEEP, GUMMY MUD

For Setzer Forest Products, Sacramento, California

Two commonly used mill-feeding methods went into partial discard recently when this well-known company completed detailed time and cost studies. Skidding was one . . . records proved it too slow for the large volume of ponderosa pine, sugar pine, Douglas and white fir required. Small-tired fork-lift trucks were the other . . . they bogged down too often while feeding from cold deck—three muddy blocks away! Plant Supt. Dewey Cappello finds the "solution", a new Michigan Model 175 Tractor Logger, "faster, more powerful, better adapted to Setzer Forest Products' job."

Unloads trucks quickly, safely, efficiently

Michigan empties logging trucks in a hurry, according to Operator Dean Yadon. "A push or two in the right places, and those big logs are off the truck—but fast!"

Handles 100,000 bd ft per day, year-around

On feeding assignment, Michigan's hydraulic clamps will lift a log six feet in diameter, or several smaller logs, and really "walk away". Big tires, four-wheel-drive take the Michigan through even the deepest mud. Output, winter and summer, averages 100,000 board feet per day. Forks can be raised as high as 11 feet 9 inches, and can be tilted downward to reach over a stack to select one log for pick-up.

Easier, simpler to operate

For ease of operation, there's no engine clutch or pedal on this machine. Instead, two small power-shift levers on the steering column permit instant shifts between low and high, forward and reverse—even while moving in the opposite direction. In tough going, Michigan's torque converter *automatically* boosts torque up to 300%. Multiplied torque is delivered through power-shift transmission to planetary-wheel axles. These planetary-wheel axles take 70% of the torque *off* the axle shafts.

Even grades yard

No other log handling unit, say these satisfied owners, can match the 27 mph Michigan Tractor Logger for speed, maneuverability and traction. They like Michigan's versatility, too; it works equally well unloading trucks, decking logs and feeding them into the mill pond . . . Setzer Forest Products' Michigan is even used to rough-grade the yard, with a two-foot squared timber held in its hydraulic clamps. Fueling, lubrication and servicing take only 30 minutes per day!

Put yourself in this position

Everyone's operation can stand some streamlining. Why not see what Michigan can do for *yours?* Your local Michigan Distributor will be glad to help you find out. Ask him, too, about the popular Clark finance plans available; choose the one best suited to your investment program.

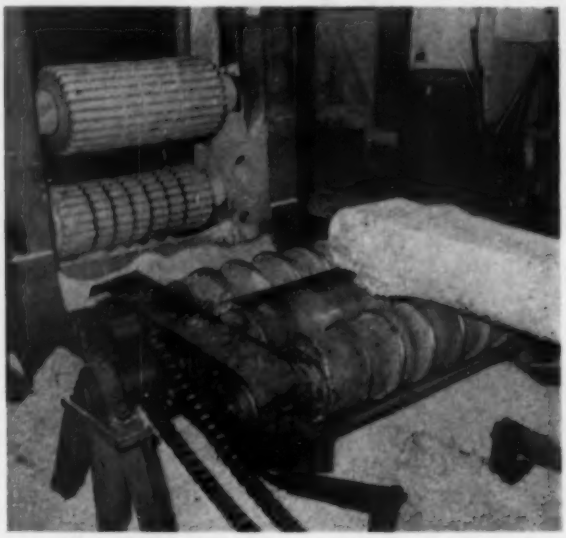
CLARK EQUIPMENT COMPANY
Construction Machinery Division
2483 Pipestone Road
Benton Harbor 32, Michigan
In Canada: Canadian Clark, Ltd., St. Thomas, Ontario

Michigan is a registered trade-mark of

CLARK® EQUIPMENT

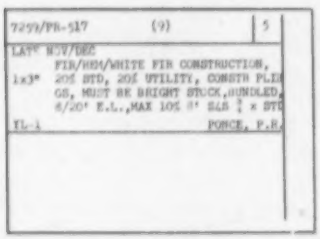
Job Saving Ideas

Cants with Sweep Produce Full Length Lumber with Special Feed on This Gangsaw



THERE'S NO WASTED lumber at A. DeWeese Lumber Co., Philadelphia, Miss. Cants with log sweep feed through this Esterer HD30 gangsaw (at left) and produce lumber for their entire length, as shown in photo. It's all done with special double spiral feed, shown at right, which automatically aligns cant as it progresses through gang and follows its curvature. After lumber has been piled and remanufactured, "kink" visible in photo is eliminated.

Card Inventory System Keeps Tab on Lumber Cargo Shipments for B. C. Mill

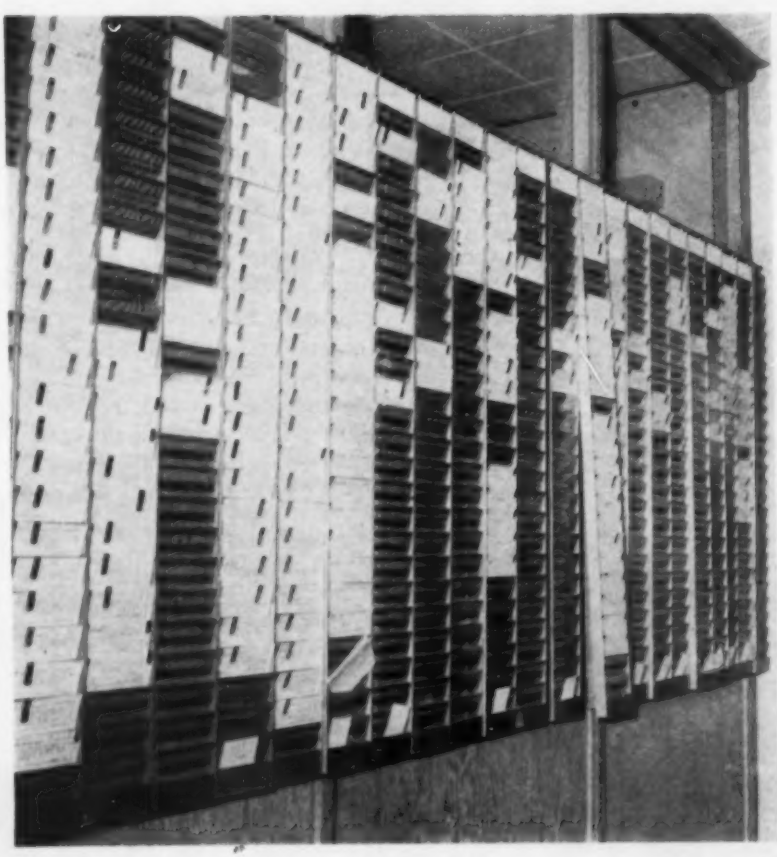

7259/PR-517 (9) 5
LATE MAY/DEC
FIR/HEM/WHITE FIR CONSTRUCTION,
1x3" 20% STD, 20% UTILITY, CONSTR PLUS
GS, MUST BE BRIGHT STOCK, BUNDLED,
6/20' E.L., MAX 10% 11' SUB 1" x STD
TL-1 PONCE, P.R.

FOR KEEPING TRACK of cargo lumber shipments as they are made up, Pacific Pine Co. Ltd., New Westminster, B. C. has devised a novel card index system. It consists of 48 racks, some of which are shown in left photo, built of ¾" plywood. Each is 4⅛" wide, 41" long, has slotted sleeves for 24 cards, such as shown above. Racks slide along rod at top, can be lifted off and moved around. Each rack at top carries name of ship for which lumber order is being prepared.

Cards on each rack indicate lumber items going into that cargo shipment. Each card (2½ x 3 - ¾") has on it (see above): order number; number of cards or items in the same order; total order in Mfbm; delivery date; size and species; lot number; destination. Cards are in four colors: white for Douglas fir; yellow for hemlock; pink for cedar; blue for pine.

Each card carries sliding plastic clip at top. Moving the clip from left to right indicates progress of order as it's being manufactured in mill. With order still in office, clip is at left; being milled, center; order completed, clip at extreme right. Daily progress while being milled is indicated in pencil on bottom of card.

Racks are grouped and separated by divider strips according to months of delivery. Order cards can be placed in racks 5 or 6 months ahead of completion, provide visual check on ship loadings scheduled.



every OK veneer knife is *made-to-order*

They will meet the particular conditions of your mill, with temper, hardness and bevel exactly suited to your needs. That's why you can depend on OK veneer knives for better veneer.

You can lower your costs with OK veneer knives, too, because they stay sharp longer and require fewer regrindings. Special high alloy steel, produced exclusively to our exacting metallurgical standards, is used. Our special heat-treating methods produce edges of uniform hardness, with unequalled resistance both to ordinary wear and unusual nicking or breaking.

Precision grinding holds thicknesses to tolerances and parallelisms of ± .001, producing the straightest possible edges and matchless cutting uniformity. Get the whole story of made-to-order OK veneer knives by writing today without obligation to Dept. 61-R.

THE OHIO KNIFE CO.

CINCINNATI 23, OHIO

Manufacturers of PLANER KNIVES • VENEER KNIVES • CHIPPER KNIVES • HOG KNIVES

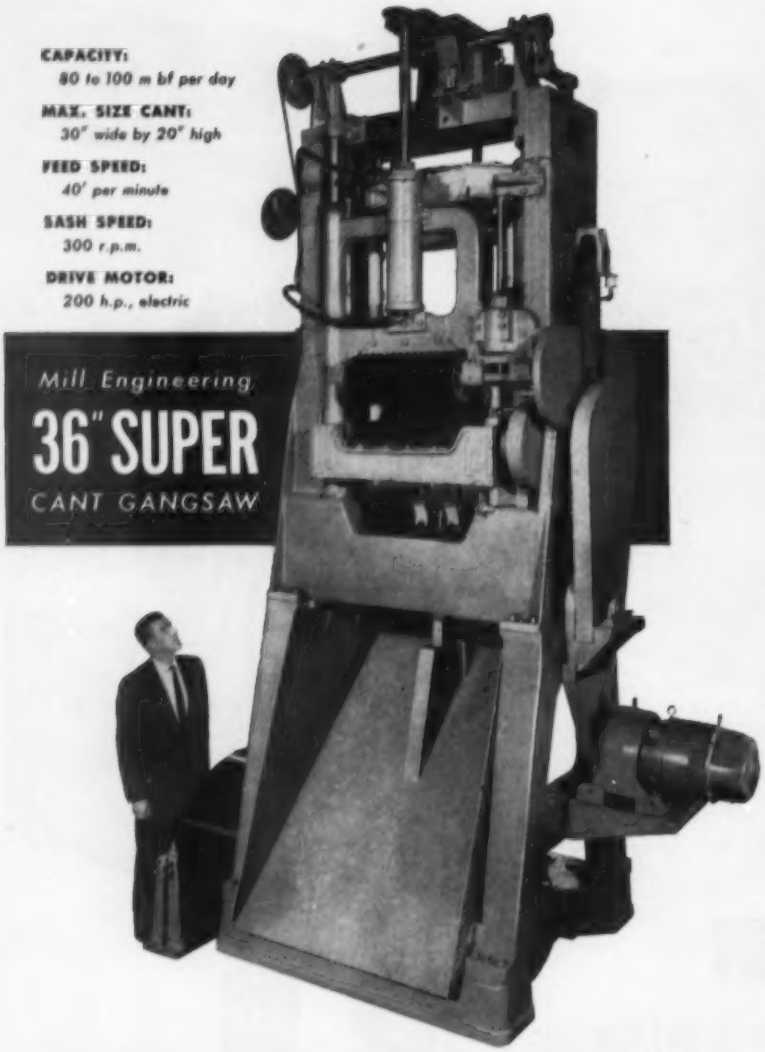
CAPACITY:
80 to 100 m bf per day

MAX. SIZE CANT:
30" wide by 20" high

FEED SPEED:
40' per minute

SASH SPEED:
300 r.p.m.

DRIVE MOTOR:
200 h.p., electric



Mill Engineering
36" SUPER
CANT GANGSAW

Big and RUGGED!

Seventeen tons of dependable production capacity—designed every inch to meet the demands of "hi-ball" American production methods. You get the economy of gangsaw utilization *plus* all the exclusive Mill Engineering extras—engineered to make your operation permanent and profitable!

Extra heavy duty, steel construction; automatic overhang synchronized to 10 h.p. electric-variable feed drive; roller bearing guide blocks; water cooled guides; machined, fluted, feedrolls with automatic positioning; fast-acting, remote, air-operated controls; force-feed lubrication; removable, steel sawdust chute; roller bearing crankshaft and con-rod; double-spoked drive pulley with power brake—backed by a complete engineering service department and readily-available American Standard parts.

Unmatched by any comparison! Mill Engineering's SUPER is still America's highest profit producing, precision gangsaw for logs, cants or double cants. Send us your specifications today—complete costs and layout on request.

Designed and Manufactured by:

MILL ENGINEERING & SUPPLY CO.

3311 FIRST AVENUE SOUTH • SEATTLE 4, WASHINGTON • MUtual 7670

Pacific Northwest Advisory Board Reports Trade

Lumber and Forest Products (Fir)

Lumber shipments for the second quarter of 1957 will require 79,729 cars, a decrease of 1961 cars, which amounts to 2.4% under actual loads for the second quarter of 1956.

Logs (Fir Region)

Slackness of market conditions added to a very high log inventory combines to slow the start of logging operations throughout the Douglas fir region. As a result, anticipated log car loadings for the second quarter of 1957 is expected to show a decrease of 4% from the 38,771 actual log car loadings of the second quarter of 1956. This would result in an estimated log car loadings for the second quarter of 1957 of 37,220 cars.

Lumber and Forest Products (Pine)

According to present volume of shipments it appears there will be a decrease of approximately 7½% under last year.

We will be fortunate to come within five per cent of last year's total for the second quarter and if things do not improve we may be down as much as 10% more.

Lumber and Forest Products (Plywood)

The plywood market has been somewhat soft and normally such market conditions call for smaller individual cars and therefore greater loadings in total number of cars. We estimate that 21,382 cars will be loaded with plywood during the second quarter of 1957, an increase of 10%.

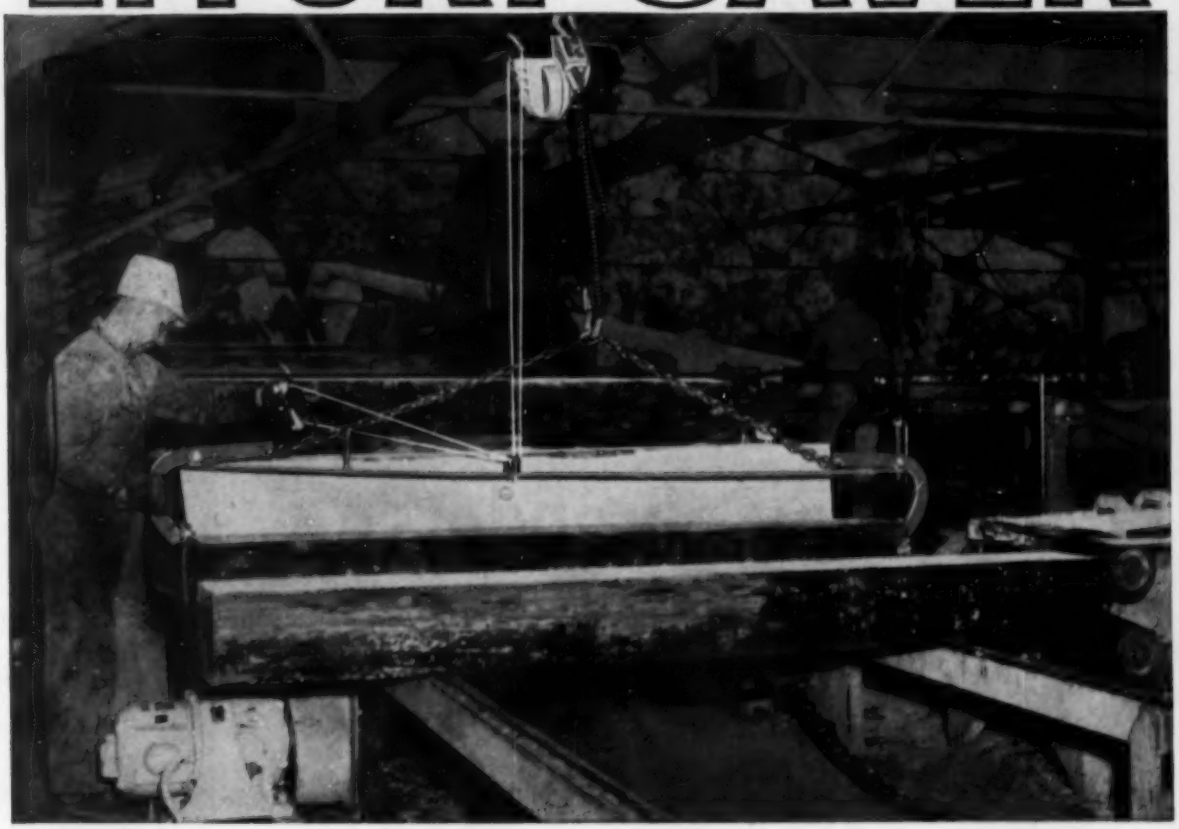
• Willis E. Parnell, who has been plant manager of the United States Plywood Corp's Shasta division at Anderson, Calif., has been transferred to the company's Associated Division, Eugene, Oregon, where he is Plywood Production manager.

New Service Offered by Oilgear for Board Plants

• The Oilgear Co. of Milwaukee, Wis., announces formation of a technical division located at 679 Main St., Waltham, Mass. This division, named "Servocontrol," is responsible for the development and production of electro-hydraulic components as well as the engineering of complete servo systems suitable for any industrial process or control requirement, such as in the board and plywood fields.

Hydraulic-electronic and servo engineers, with extensive background in instrumentation and controls, form the key technical personnel of the Servocontrol Division.

EFFORT SAVER



SMALL BUT POWERFUL YALE HOIST SPEEDS LUMBER PROCESSING WITH MINIMUM EFFORT

Wherever Yale Midget King Electric Hoists are used, handling of logs or any other type load is fast and easy. Midget Kings instantly respond to power demand—lifting action is quick, lowering is smooth. Yale Midget Kings are equipped with a pull-cord grip that provides constant up-and-down load control—leaving one hand free to guide the load. Furthermore, the compactness and light weight of Midget Kings lets you take this electric hoist from job to job for fast, on-the-spot lifting.

Yale Midget Kings (cap. ⅛ to 2 tons) also incorporate all essential safety features such as a fracture-resistant load hook, upper and lower limit stops, quick-acting load brake and totally enclosed motor brake. For full facts, call your local Yale Hoist Distributor or send coupon.

To meet the need of expanding industries for better materials handling methods, look to Yale for advances in research, engineering, manufacturing, sales, service—as

YALE BUILDS FOR THE NEW ERA

YALE*

*REG. U. S. PAT. OFF.

INDUSTRIAL LIFT TRUCKS AND HOISTS

Gasoline, Electric & LP-Gas Industrial Lift Trucks • Worksavers Warehousers • Hand Trucks • Hand and Electric Hoists

MAIL THIS COUPON TODAY

The YALE & TOWNE Manufacturing Co., Dept. A-1226 Roosevelt Boulevard, Philadelphia 15, Pa.

Please send me Yale's "Why" booklet on Yale Midget King Electric Hoists.

Your Name_____

Firm Name_____

Address_____

City_____ Zone____ State_____

In Canada: write The Yale & Towne Manufacturing Co., St. Catharines, Ontario, Canada

- ✓ BEAVER
- ✓ CLINTON
- ✓ HOMELITE
- ✓ I. E. L.
- ✓ LOMBARD
- ✓ MALL
- ✓ McCULLOCH
- ✓ OREGON
- ✓ POULAN
- ✓ TERRILL
- ✓ TITAN
- ✓ WRIGHT

Follow the leaders... they all endorse Nicholson files

Leading chain saw manufacturers advise use of Nicholson and Black Diamond files to help keep your chains cutting fast and true.

You always get the right file for your chain, because Nicholson and Black Diamond files are the results of intensive research in the laboratory of the world's foremost file manufacturer.

You sharpen chains faster, because Nicholson and Black Diamond files are designed for easy use.

New Nicholson and Black Diamond Round Smooth Chain Saw file (left) proved smoothest-feeling, fastest-cutting, best-finishing of all leading brands in impartial tests by chain saw manufacturers. Other Nicholson "specialists" for various types of chains are Flat Chain Saw file (right) and No. 565-D Chisel Bit Special (not shown).

To get most out of your chain saw, specify Nicholson or Black Diamond files at your chain saw dealer or hardware store.

NICHOLSON FILE COMPANY, PROVIDENCE, R.I.
(In Canada: Nicholson File Company of Canada Ltd., Port Hope, Ontario)

NICHOLSON FILES *A FILE FOR EVERY PURPOSE*

Report on World Production, Consumption and Trade

World Trade in Fibreboard

Material is excerpts from International Consultation on Insulation Board, Hardboard and Particle Board, held at Geneva, Switzerland, January 21-February 5, 1957, under auspices of the Food and Agriculture Organization, with the Cooperation of the Secretariat of The Economic Commission for Europe.

THE MAJORITY OF FIBREBOARD produced is consumed domestically, and a relatively small part of world output enters into international trade. In 1955 only ten countries exported on a significant scale (over 5,000 tons); in only five of these countries (Austria, Belgium, Finland, Norway and Sweden) is the fibreboard industry largely directed to the export market.

About one-sixth of all fibreboard produced enters into international trade. Exports from countries outside Europe and North America are negligible. North American exports have remained relatively steady; for the most part these consist of border trade between Canada and the USA. Sweden alone accounts for half of all world exports, and Finland and Norway together for another sixth.

Like all forest products, fibreboard was badly hit by the slump which followed the 1950-51 boom. By 1954, however, exports had exceeded their previous peak level, and a further substantial expansion was recorded in the following year. Imports of fibreboard are naturally more scattered geographically. Even so, only twelve countries in 1955 imported more than 5,000 tons.

Regional Shares of World Fibreboard Production in 1938, 1948 and 1955

	1938	1948	1955
North America	77	70	53
of which USA	(73)	(61)	(47)
Europe	20	27	37
of which three Northern countries	(14)	(18)	(21)
All other regions	3	3	10

World Fibreboard Production in 1955 (5000 metric tons)

	Hard-board	Insulation Board	Total
Europe			
Three northern countries	476	176	652
Other	384	154	538
North America			
U. S. A.	485	1012	1497
Canada	62	125	187
USSR	50	30	80
Oceania	80	20	100
Africa	35	15	50
Asia	25	15	40
Latin America	30	10	40
World	1630	1560	3190

Though still the largest individual producer, the United States now accounts for less than half world output. Production of hardboard has risen much more quickly than that of insulation board, so that hardboard today accounts for over half of all fibreboard produced.

Hardboard as Percentage of Total Fibreboard Production 1938, 1948 and 1955

	1938	1948	1955
North America	8	29	32
Europe	39	61	72
Other regions	61	49	71
World	15	38	51

The United States of America accounts for 59 per cent of the world output of insulation board, but for only 27 per cent of total hardboard production.

U. S. Hardboard Production, By Type, 1939 - 1954

Year	Production (mill. sq. ft. 1/8" equivalent)	Distribution by Type Hardboard Screenback Tempered	Screenback Untempered	Smooth 2 Sides Tempered	Smooth 2 Sides Untempered	(Percentage of total) semi-Hardboard
1939	232	24	40	5	2	29
1944	471	26	35	16	15	8
1947	758	23	43	7	20	7
1950	951	32	33	4	19	12
1952	1067	33	30	7	17	13
1953	1166	34	28	7	18	13
1954 (Jan./Sept.)	925	35	26	6	20	13

Germany and Finland Make Chipboard Products

Germany

Most important development in wood processing has been the rapid expansion of wood-chip board production from 28,814 cubic meters in 1951 to 166,774 cubic meters in 1955. German producers are able to use fuel wood, fiber wood, sawmill residues (excluding sawdust) and even brushwood in this product. The firm Friedrich Kreibaum of Hannover has developed production at its Bavarian plant in Markt Bibard chiefly based on use of brushwood and low grade fuel wood. The firm states that its major problem is the difficulty of storing and working with brushwood stocks. Other plants are using the Behr-Wendlingen and Fahrny systems. The latter, developed from a Swiss patent, has been adapted for use by the Norddeutsche Homogen Holz Gesellschaft, Triangel (daily capacity 50 metric tons), and the Suedostholz-GMBH, Metz Gesellschaft, Goettingen-Grone (daily capacity 60 metric tons).

Most spectacular event of 1955 was the 75 percent turnover increase recorded in domestic wood-chip board production, which is generally attributed to new uses found for the product and to standardization of its quality. Wood-chip boards are now considered suitable for door paneling and furniture. Demand for plywood has been considerably effected by this development, and it was chiefly because of increasing use of cheaper wood-chip boards that plywood production expanded only 2.8 percent in 1955. Fiber boards also enjoyed a wide use in building construction and increasingly replaced lumber for insulation material and ceilings.

Finland

The new hardboard product known as *chipboard*, which utilizes sawmill residues and small roundwood, continues to make great strides in Finland. In 1955, construction of the first chipboard plant was started by Vikala Oy and was completed in May this year. Subsequently, three other firms have started building chipboard mills: Hameen Vaneeri Oy, Hameenlinna, capacity 15,000 cu. m. annually; Schaumann Oy, Jyvaskyla, same size; and SOK (the Finnish Co-operative Association), capacity about 20,000 cubic meters annually. By the end of 1957, when these plants should be completed, annual chipboard capacity will be 100,000 cubic meters. The product will be used principally for manufacturing furniture.

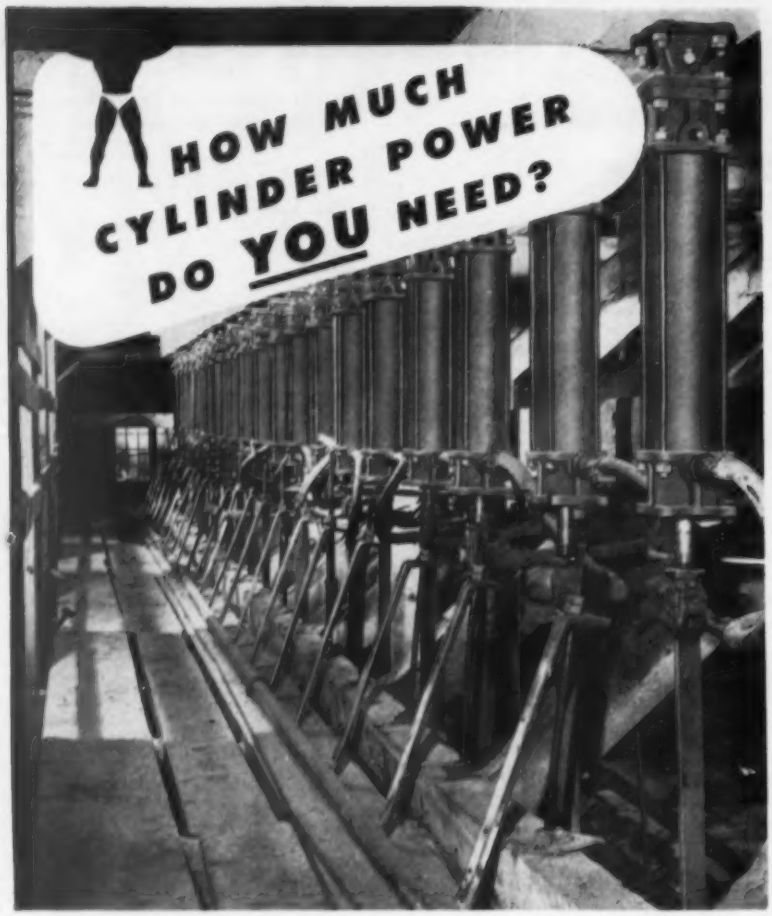
Treating Particle Boards Against Fungi and Termites

By
I. STOLLEY
Braunschweig-Brunswick, Republic of Germany

SOME RESULTS, although not yet complete, have already been obtained in the manufacture of fungi-resistant and termite-resistant particle boards. It may be possible to achieve increased resistance of the particle boards to fungi and termites by the admixture of a preservative during the normal process of manufacture.

Pentachlorphenol has proved a suitable preservative against fungal and animal (termite) destroyers. The preservative may be added to the resin and sprayed with it. The sodium salt of pentachlorphenol may be added to the resin as a saturated water solution, or may be dissolved in the resin.

Using pentachlorphenol, it may be suspended in the resin as a watery paste or as a solution in oil or alcohol. An admixture of one per cent to two per cent of pentachlorphenol (related to absolutely dry wood) will be necessary for fungi and termite resistant particle boards. The addition of the preservative does not usually harm the other properties of particle board.



Cape Arago Lumber Co., Empire, Oregon, uses
Ledeen CYLINDERS on gang trimmer

This battery of 4" Ledeen Cylinders has been giving dependable, trouble-free service on this gang trimmer for over 4 years. Low maintenance and long life are reasons why Ledeen Cylinders find wide acceptance and countless applications in the timber industry.

Standard cylinders available from stock in 1½" through 12" bores... Special cylinders up to 20". These cylinders offer a wide range of capacities to meet your power requirements.

HOW MUCH CYLINDER POWER DO YOU NEED?

Send for this cylinder capacity chart. It will help you determine the size Ledeen Cylinder you need to meet your power requirements.

Write for Bulletin 500

VALVES • CYLINDERS
VALVE ACTUATORS
AIR-HYDRAULIC PUMPS
AND BOOSTERS

Ledeen Mfg. Co.
3336 North Gilman Road
El Monte, California

Central Lubrication Systems Offer Mill Advantages

Sawmill lubrication was the subject for the 36th meeting of the Redwood Sawmill Committee held May 18th, Willits, Calif.

Wade A. Spence, Union Oil Co., Eureka discussed need for simplifying lubricating procedures by reducing the number of different types of oils and greases normally used in sawmill lubrication. He said many special-purpose lubricants contain additives which make them better suited for other than sawmill use.

Spence also covered the development of high-viscosity-index oils with rust and oxidation inhibitors which have made it possible for one weight of oil to be used in nearly all oil applications in the sawmill. The development of new greases with lithium and barium metallic soap stocks has accomplished the same result for the grease applications.

The need for central lubricating systems because of higher production costs, higher maintenance labor costs, and higher costs of down time was discussed by Dave M. John, Lincoln Engineering Co. of California. Since a central lubrication system is mechanically controlled, lubrication is made possible in the right quantity, at the right time, and in the right place. A timer permits automatic operation. Further advantages are that greasing is possible during operation, and fittings and bearings which are normally inaccessible may be greased.

Cost of installation of a central system, according to Mr. John, ranges from five to den dollars per bearing lubricated. Systems may be installed gradually, starting with hand-operated types, if desired. Savings in lubricants and in power consumption are effected by installation of central systems. It was brought out that one system is needed for each type of lubricant, and each system can transport lubricants a maximum distance of 150 to 200 feet from the pump, depending upon the pipe diameter of the distribution system and the viscosity of the lubricant.

Harry Howell, Union Lumber Co., Fort Bragg, discussed steam lubrication and described a low-cost type of injection system for lubricating steam cylinders and valves. Don Thompson described lubrication methods at The Pacific Lumber Co., emphasizing necessity for clean lubricants and suggesting that contaminated lubricants are responsible for many breakdown problems.

Bill Dimmick, Union Lumber Co. and John Bailey, The Pacific Coast Company, reported on results of tests comparing taper-sawing to non-taper-sawing. Tests indicated that taper-sawing was more than justified by increased recovery of upper grades and long lengths.

"Handling time cut 80%— Storage space increased 60%"

SAYS E. A. STEWART LUMBER CO., INC. TEXARKANA, TEXAS

Three years ago, in an effort to improve the efficiency of its lumber handling operation, E. A. Stewart Company, Inc., turned to USS Gerrard Flat Steel Strapping. The resultant savings in time, labor, and money have been nothing short of sensational!

Here's what USS Gerrard Steel Strapping has accomplished:

✓ **Two men with a fork lift can now load a car with 25,000 feet of Gerrard palletized flooring in an hour and a half to two hours at the warehouse dock. Formerly, it took six hours for five men to load only one car. Labor savings can amount to as much as 25 dollars per car.**

✓ **Two men can load a truck with 16,000 feet of palletized flooring in 45 minutes or less. Previously, two men required four hours to load a truck, and of course, the truck, the driver, and the dock space were tied up for all that time. In fact, ten trucks can now be loaded in the time it previously took to load two.**

✓ **Due to tight, firm packaging by Gerrard Steel Strapping, warehouse storage space has been increased by 60%. Pallets can be stacked much higher and are still accessible to handlers.**

In addition, every bundle of Stewart flooring is standardized and uniform, and can be inventoried at a glance. And pilferage of lumber from Gerrard Strapped packages is virtually eliminated.

Why don't you investigate USS Gerrard Steel Strapping — Round and Flat? It might very well be the answer to your packaging or materials handling problem. Contact our engineers if you'd like some help in your selection. And send for the new GERRARD Blue Book of Packaging, now.

GERRARD STEEL STRAPPING DIVISION, UNITED STATES STEEL CORPORATION
GENERAL OFFICES: CHICAGO, ILLINOIS

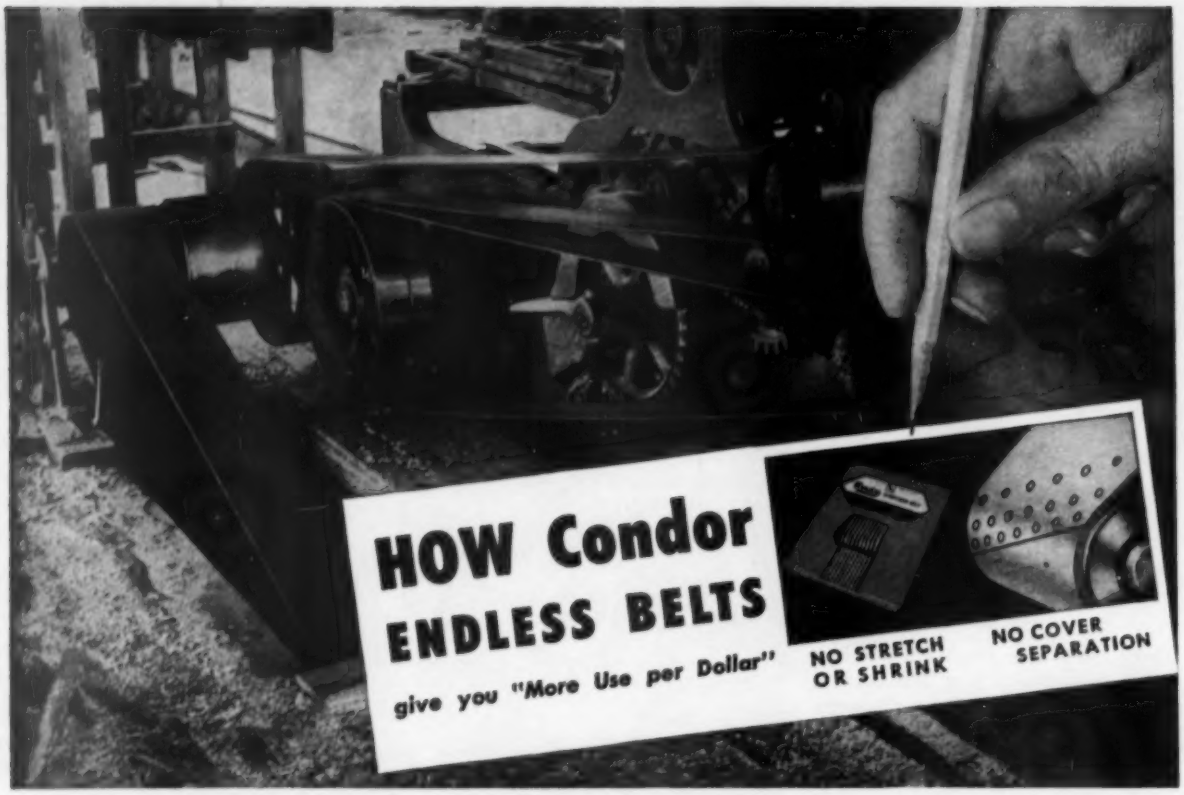
USS GERRARD STEEL STRAPPING
Round and Flat
UNITED STATES STEEL

USE THIS COUPON

Gerrard Steel Strapping Division
United States Steel Corporation
4729 S. Richmond Street, Chicago 32, Ill.

Please send me, free of charge, the new 36-page GERRARD Blue Book of Packaging.

Name .....
Company .....
Address .....
City ..... State .....



Condor Whipcord Endless Belts Boost Production

Steady, unfailing power delivery with high overload capacity, long life, and freedom from stretch or shrinkage result in greater efficiency at lower cost for machines equipped with Condor Whipcord Endless Belts. These all-purpose belts offer exceptional advantages for hard wearing installations—on drives with short centers, small take-up, small pulleys, reverse bends, high speeds and heavy loads at high tensions. Extremely flexible, they are ideal belts for machines where serpentine drives supply power for several operations. Condor Whipcord Belts feature an endless-wound, sealed-in cord construction which is de-stretched during manufacture. They will not shrink on the drive and are virtually unaffected by atmospheric changes. On many drives they have outlasted 3 to 10 ordinary belts.

EXTENSIBLE-TIP COVER SPLICE

R/M's exclusive Extensible-Tip cover-end splice "elasticizes" the splice area with a series of rubber rivets to dissipate stress when rounding pulleys. This eliminates cover separation . . . adds further to the longer service life of Condor Whipcord Belts.

CONDOR COMPENSATED BELT

On closed drives where belt fasteners are required, Condor Compensated Belt eliminates fastener trouble. A patented Manhattan process equalizes belt ply stresses when rounding pulleys. *Every* ply is under uniform tension and *every* ply pulls its full share of the load to eliminate ply rupture and separation—especially at the fasteners. Condor Compensated Belt holds fasteners up to 4 times longer than ordinary belt!

SELECTION OF DRIVING SURFACES

Both Condor Whipcord Endless Belts and Condor Compensated Belt are available in a selection of four driving surfaces to meet various machine tension requirements. Let an R/M representative show you how to boost production . . . get "More Use per Dollar" . . . with Condor Endless Belts and Condor Compensated Belt at your mill.

RM 6041

R/M

MANHATTAN RUBBER DIVISION—PASSAIC, NEW JERSEY

RAYBESTOS-MANHATTAN, INC.

Other R/M products include: Industrial Rubber • Fan Belts • Radiator Hose • Brake Linings • Brake Blocks • Clutch Facings
Asbestos Textiles • Packings • Engineered Plastic and Sintered Metal Products • Laundry Pads and Covers • Bowling Balls

In Alabama . . . Chips Go Air Express!

• In Tuscaloosa, Alabama, the Albert Holman Lumber Company has picked a pneumatic conveying system to carry chips from chipper to loading point.

Designed specifically for the mill by Conveyair, and installed in two days under the supervision of Conveyair engineers, the "Chipveyor" handles eight units per hour, blows chips a distance of 400 feet to box car loading. The lightweight pipe had to be laid across rough, uneven ground, and elevated 30 feet to pass through an intervening building. A belt conveyor in this layout would have proved excessively costly to install and maintain.

The "Chipveyor" at the Holman mill gets its "big wind" from a 25 hp motor driving a Roots-Connersville blower, while a three hp motor takes care of the feeder drive through a 40:1 reducer. The Conveyair feeder, a patented design, maintains its efficiency with a mechanical air seal arrangement which prevents any loss of air pressure while material is being fed into the system through the heavy steel rotor.

For car loading, a quick-change valve was built into the system some 60 feet from the discharge point and coupled to two branches, one leading to a flexible nozzle which can be manually traversed for blowing chips through the doors of standard box cars, the other to a cyclone for gravity feed into open-top cars. Here compaction was not required, but many Conveyair installations incorporate an oscillating nozzle which will pack 25% more chips into any given space by compaction, considerably increasing payloads.

How To Salvage Flood Damaged Lumber

Prompt cleaning and redrying are essential to prevent serious losses from stain and decay in lumber damaged by flood waters, according to Report No. 1904, "Salvaging Lumber in Flooded Areas", published by The U. S. Forest Products Laboratory.

The report recommends redrying in kilns as the quickest and most effective way to check fungi that cause stain and decay in lumber. If kilns aren't available, cleaned lumber should be repiled, with boards that were on the bottom of the old piles put on top of the new ones for faster air drying. Repiling stickers spaced crosswise between layers of the lumber will allow air to circulate through the piles and promote drying.

If the lumber has to be repiled without stickers for a while, dip or spray treatment is recommended, with chemicals that prevent staining.

A 25-ton Pacific truck loaded with Douglas fir logs.

Aeroquip Flexible Hose Lines Withstand Vibration and Shock on Logging Equipment

PACIFIC TRUCK AND TRAILER LTD., VANCOUVER, INSTALLS AEROQUIP ON GIANT LOGGING TRUCKS

Pacific trucks are built to get back in the woods and get out the logs with a minimum of maintenance. That's why Aeroquip is used by Pacific for hydraulic, lube oil, fuel and air lines. Aeroquip Hose Lines are tough, yet flexible to withstand vibration. If a line is damaged, replacement is quick and easy anywhere, using Aeroquip Bulk Hose and Reusable Fittings.

Get full information on how Aeroquip can cut downtime, save money on your equipment. See the Aeroquip Distributor listed in your Yellow Page Directory, or write us.

A Pacific mechanic installing Aeroquip Hose Lines for power steering lines on a logging truck.

Aeroquip Hose Lines made from bulk hose and reusable fittings are connected to the oil filter.

Aeroquip

AEROQUIP CORPORATION, WESTERN DIVISION
BURBANK, CALIFORNIA

SALES OFFICE AND WAREHOUSE FOR OREGON, WASHINGTON AND IDAHO:

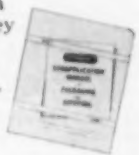
SPARKS AEROQUIP NORTHWEST, INC., 1624 S.E. GRAND AVE., PORTLAND 15, ORE.

Another **STANLEY STEEL STRAPPLICATION*** on the job

Settling down for a long, SAFE journey

These bundles of green veneer will travel 30 miles by truck along mountain roads *without damage*, thanks to Stanley Steel Strapping. This user reports that even when bundles have toppled from storage piles or trucks, the great strength of the strapping has kept the bundles intact and undamaged. Ten years of usage has convinced this woodworking company in Oregon that bundling green veneer with Stanley Steel Strapping is the easiest, fastest, safest and most economical way to handle, store and ship their product. "Delivery is prompt and service excellent" . . . although this customer is located in the foothills of the Cascade Mountains, many miles from a sizable city.

Whatever *your* product – dimensional lumber, veneer, sheathing, flooring, specialty lumber – bundling with Stanley Steel Strapping can speed up operations, reduce product damage and cut costs. You, too, can count on prompt delivery and exceptional service from Stanley



WRITE FOR YOUR FREE COPY of the "Stanley Strapplication Manual of Packaging and Shipping" to **STANLEY STEEL STRAPPING**, Division of The Stanley Works, Dept. F, 1176 Lake Street, New Britain, Conn.

STANLEY **INSURE IT – SECURE IT WITH STANLEY STEEL STRAPPING**

STANLEY

STANLEY TOOLS • STANLEY HARDWARE • STANLEY ELECTRIC TOOLS
STANLEY STEEL STRAPPING • STANLEY STEEL

**The system-atic way to solve specific packaging and shipping problems*

Firm's Earnings Decline

• Sharp decline in B.C. Forest Products' net earnings—from $1,349,502 for the six months ended March 21, 1956, to $179,504 for the corresponding period this year—was mainly caused by a serious drop in prices obtained for the company's products, according to H. G. Munro, president, in his report to shareholders.

"Due to a number of reasons, the demand for Pacific coast lumber and plywood has declined, and supply and demand are out of balance. While it is hoped that the bottom of the market may have been reached, this situation may continue for some time." The company operates four sawmills and a plywood plant and veneer plant. It is building a $40,000,000 pulp mill at Crofton, Vancouver Island.

Decline Thought Brief

Decline in the United Kingdom market for British Columbia lumber is merely temporary, according to Gordon H. Rochester, Canada's commercial counsellor for timber in London, who spent a few weeks in Vancouver and other lumber centers this spring. Higher ocean freight rates are one reason for the slow-up in British purchases, says Mr. Rochester, who points out that the price of coastal fir and cedar is now competitive with Baltic supplies on an f.o.b. basis. Britain's housing program calls for building of 30,000 new units a year, Mr. Rochester reports as an indication of continued demand for lumber.

New Booklets Tell How To Buy and Use Fir Plywood

• Three new booklets on how to work, how to finish, and how to buy fir plywood have been released by the Douglas Fir Plywood Association, Tacoma, Wash.

"How To Work Fir Plywood" is a 12-page compilation of tops on using plywood, from the first saw cut to the last hinge.

"How To Finish Fir Plywood" details various methods for painting and finishing fir plywood.

"How To Buy Fir Plywood" explains the meaning of plywood types and grades. It then briefly describes the industry's rigid quality-control program, symbolized by the "DFPA Tested Quality" stamp that appears on all products manufactured under the program.

Single copies of all three booklets may be obtained free; quantity prices range from $1.75 per 100 for "How To Finish Fir Plywood" and "How To Buy Fir Plywood," to $3.50 per 100 for "How To Work Fir Plywood."

MICRO SWITCH . . . FIRST IN PRECISION SWITCHING

How to make your sawmill operation more automatic– more productive– with MICRO SWITCH Precision Switches

MICRO SWITCH "ML" Switches combine rugged construction with precise operation

The switching unit is enclosed within a sturdy aluminum housing which protects the precision switching unit from physical damage, provides a means of mounting and permits conduit-type wiring. Both single—and two-circuit switching units are available. Electrical rating is 20 amperes, 120, 240, 480 volts a-c; 115 volts d-c; ¼ ampere 230 volts d-c; ¾ H.P. 110 volts a-c; 1½ H.P. 220 volts a-c.

Application of automatic processes to the lumber industry is necessarily an individual matter. This is because of variations in product materials, mill locations and equipment used.

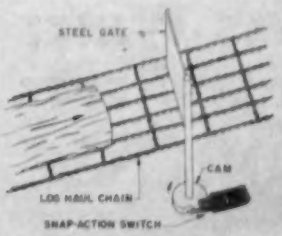
MICRO SWITCH precision switches are "made to order" for this type of operation. They may be installed at strategic points to meet the exact requirements of the specific job at hand.

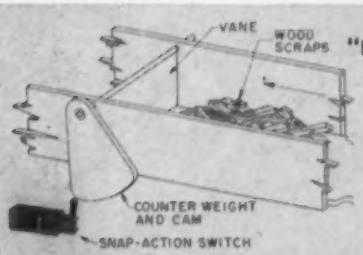
Manufacturers of sawmill equipment and sawmill operators both find these switches the practical short cut to greater profits through more automatic operation, increased production and less waste of time and material.

Here are two applications where sawmill operators have used MICRO SWITCH precision switches. They are but two of hundreds of uses mill owners find for these reliable precision switches.

"ML" switch used as log haul over-run limit

Should the log haul chain carry the log past the proper transfer point, the log operates the steel gate. This rotates the shaft and cam operates MICRO SWITCH "ML" limit switch which interrupts the motor contactor circuit and stops the log haul. "ML" switches were chosen because of their excellent environmental seal and extreme reliability needed on this application.





"ML" switch is control limit to avoid conveyor jamming

Scraps of wood pass down a conveyor line after they are cut off by a trim saw. Should a jam-up cause the conveyor to fill, the vane will be operated. The vane is counter-weighted by a sector cam, made of heavy steel plate. When the lowering of the cam operates the "ML" switch, the conveyor line shuts down. The "ML" switches were selected because they are sealed against weather and permit a 60° overtravel.

MICRO SWITCH has a technical specialist fully experienced in the application of switches to lumber and wood-working applications. Let him help you. Call your nearest branch office. Stocks of switches are in the hands of distributors everywhere.

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
In Canada, Leaside, Toronto 17, Ontario • FREEPORT, ILLINOIS

The Fable of the Lumberwolves

by **ROBERT E. MAHAFFAY**
West Coast Lumberman's Association

LUMBERWOLVES WERE AT ONE time the strongest and most powerful and most respected group of beasts in the forest. They ate the best food, slept in the best caves, and when they wished to lie in the sun, no one dared molest them.

The other animals—the steelephants and the alumilions and the chemicreatures—resented this state of affairs, but there wasn't much they could do about it.

So while the lumberwolves dined the other animals remained outside the circle. But they looked at the food with a great deal of interest, their eyes glowing.

With matters going along so well, the lumberwolves fell presently to squabbling among themselves. They forgot that no one is perfect. They forgot that together—despite their individual shortcomings—they had dominated the forest.

They began to wrangle over who would have which morsels of food and which cave and which patch of sunlight.

They grew critical of each other. It was noticed that one of the lumberwolves had a coat that was shorter and not quite so thick as the others, although this had not seemed important before. He was driven away.

ANOTHER OF THE LUMBERWOLVES had lost two teeth when he bit down on a colored stone, thinking it was a stray piece of tenderloin. He made an odd noise when he ate. Two of his former friends decided this was intolerable. During the following fracas, which wound up tragically for the lumberwolf with the missing teeth, a number of steelephants crept into his cave. They proved to be stubborn, and would not get out.

A third lumberwolf had always been colored a little differently than the others. Not much; there was a small silvery patch on his chest; it was assumed his mother had one been frightened by an alumilion.

No one had ever remarked unfavorably on the patch. But now this coloring created a great division among the lumberwolves. They took violent sides. They held wrathful meetings. Small fights broke out and grew into large ones. Pitched battles were fought. The slaughter mounted.

By the time it was over a good many of the lumberwolves had perished, and those that remained were not worth much. The steelephants and the alumilions and chemicreatures, meanwhile, had eaten all the lumberwolves' food and taken over the caves and the patches of sunshine.

The lumberwolves were no longer powerful enough to object. They continued to exist after a fashion, living in the more drafty and poorly located shelters, and eating whatever was left over or slightly spoiled.

Some of the older lumberwolves said it seemed a pity to be reduced to this after the times of glory they had once enjoyed.

No one else cared.

Firms Complete Merger

Boise Payette Lumber Co., Boise, Idaho, and Cascade Lumber Co., Yakima, Wash. have merged to form Boise Cascade Corp. Unification was carried out in order to make raw materials of both companies available for more intensive utilization. The companies' directors concluded that an economically feasible plan should be worked out to properly manage timberlands of each on a basis whereby wood residues would be profitably used in by-product manufacturing facilities of adequate size. Considerable research will be carried out on possible uses for the wood residues. Boise Payette owned 160,000 acres of timberland in Southwest Idaho and three operating sawmills; Cascade Lumber owned 192,000 acres of timberland in South Central Washington and four sawmills.

14 Years Continuous Production With a

WILLIAMS-WHITE Hot Plate Press

The 640-Ton Hot Plate Press illustrated has been producing plywood panels 102" x 50" since 1943 . . . a typical example of continuous production obtainable with a WILLIAMS-WHITE Hot Plate Press. Available in capacities from 50 through 5,000 tons for the production of plywood, hardboard and allied materials, each is engineered to your specifications. Take advantage of our "know how." For details write us direct or to any WILLIAMS-WHITE Representative. Ask for Bulletin 200-A.

REPRESENTATIVES
CALIFORNIA, Los Angeles: George A. Davies Mach'y Co.
ILLINOIS, Chicago: WILLIAMS-WHITE & CO., 53 W. Jackson Blvd.
MICHIGAN, Detroit: E. E. Wood Mach'y Co.
OHIO, Cincinnati: Columbus or Dayton: Selfreat-Elstad Mach'y Co.
Cleveland: A. L. Bechtel & Son
OREGON, Portland: Allied Northwest Mach. Tool Corp.
PENNSYLVANIA, Pittsburgh: Frank Ryman's Sons
Wynnewood (Phila.): Edw. A. Lynch Mach'y Co.
WASHINGTON, Seattle: Perine Mach'y & Supply Co.
WISCONSIN, Milwaukee: Pagel Mach'y Co.

BUILDERS OF MACHINERY SINCE 1854

WILLIAMS-WHITE & Co.
310 EIGHTH ST. • MOLINE, ILLINOIS
PRESSES • BULLDOZERS • BENDERS • PUNCHES • SHEARS

Monarch Announces NEW Line Bar

with the "STOP WATCH" Set

SPEED ACCURACY • VERSATILITY

- **Pushbutton Controls — infinite number of sets available.**
- **Air-operated, dual crowder rolls.**
- **Horizontal fluted rolls; spiral feed rolls hold stock against line bar.**
- **Less than .002" mechanical variation in headblocks.**
- **Headblocks retain accuracy indefinitely without wear.**
- **Oil Mist Lubrication of gears by pressure system.**

With the Monarch 99 Line Bar, a Fixed, Pre-Set Position can be adjusted in seconds to a NEW SET DIMENSION!

AUTOMATION AT ITS BEST { *Saves You Money and Time on Cutting to Order*

Monarch 5 to 9-ft. Bandmills

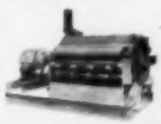
Extra operating adjustments — extra built-in strength at critical points — Multi-Ratio Straining Device — QuadrAdjust Bearing Unit on top wheel — positive lock after adjustment. Push-button controls.

WURSTER & DIETZ GANG SAWS

G.X.V. Series for round logs or cants. Capacity to 28"x28"; 45,000 to 89,000 b.f. per 8-hour shift. Other models from 18" to 47", ranging in production from 20,000 to 180,000 ft. per shift.

Monarch Stub Edger

Simplified shifting cuts labor, keeps production high. True, uniform edges. Available in 4", 6", 8", 12" sizes. Chrome-plated, alloy steel arbors. Sawdust-free locking device assures accuracy.



Monarch EDGERS: New Series: 4", 6", 8", 10", 12", with or without power shift. Positive new lock guarantees accurate cut, clean, uniform edges. Double-keyed, large diameter, chrome plated alloy steel saw arbors. **Ask about Monarch Sawmill Trimmers.**

Monarch HIGH SPEED CARRIAGES

Top production performance under most gruelling service conditions with minimum maintenance. Chain driven knees, headblocks operate at high speed. One-man operated or sawyer controlled. Medium, heavy and extra heavy duty models.

WRITE OR PHONE

for complete information on what this newly developed Monarch Model 99 Line Bar will do for you in your mill!

Monarch
Forge & Machine Works, Inc.

2130 N. W. York Street
PORTLAND 10, OREGON
Phone: CA 7-0631

BUY MONARCH...AND MEASURE LOW COST IN QUALITY AND LONG SERVICE

Mill Revamps Dry Sorting . . .

(*Continued from page* 39)

the planing mill. Storage area of sheds is asphalt coated.

Building Details

Sheds are built of Southern pine framing with galvanized iron for roof and siding. Framings were fabricated at the site by Connector Truss Co.; timbers were furnished by Angelina. Section through each building shows two outside columns, with one column at center line. This is two saw-tooth trusses backed up together. Cooling shed has a total width of 100 feet, made up of two 50 ft. half trusses; rough sheds have a width of 150 ft., consisting of two 75 ft. half trusses.

All foundations are drilled footings as opposed to excavated and formed footings. This process involves drilling holes into the ground under column locations and expanding the drill at the bottom of the hole in such a manner as to give a spread footing.

• Dry kiln outside walls are brick and inside walls are 8 inch light weight, insulating type concrete tilt-up walls. In constructing kilns tilt-up walls were poured in horizontal position and after proper curing were tilted up into position to form walls which separate various kiln compartments. Kilns are operated at a steam pressure of 125 psig.

Power Plant

This includes a Westinghouse 3125 KVA turbo generator, which furnishes electricity for all mill motors. Fuel for the two Babcock and Wilcox boilers (320 lbs. working pressure) is sawdust, bark and planer shavings, held in three silos for delivery to boilers by Rex elevators. Silos are 25 ft. in diameter, 25 ft. high, have a rotating screw feed device on bottom which feeds fuel to a conveyor belt leading to the elevator.

There is also a Wicks standby boiler, which is natural gas fired.

A dual set of controls is provided in the power house, upstairs and downstairs.

Sawmill Highlights

• Mill cuts about 20 million bd. ft. per year.

• Log supply is purchased as logs in part and also bought and logged on national forest timber sales. Average 16 ft. log content is about 40 bd. ft. Average stumpage price is $44 per M bd. ft.

• Deck on discharge side of Nicholson barker has return drop to two acre log pond. Logs can be refed to sawmill from here.

• Log deck has a shaker system, which eliminates deck man. Nigger, loader and kick out are steam operated. All trips are air operated.

• Carriages are driven by amplidyne units, 186 hp. General Electric.

• Bandmills are driven by 250 hp. motors with V-belt drives.

• A lath department salvages stock beyond the slasher, produces about 18,000 fence laths a day, used by Norris Fence Co., Lufkin, Texas.

• Other residue wood is chipped for delivery to Southland Paper Mills, Inc.

Wood Preservers Elect

At the annual session of the American Wood Preservers' Association held in Chicago, Illinois, on April 29, the following officers and executive committee members were installed:

President—W. W. Barger, Tie and Timber Treating Dept., Atchison, Topeka & Santa Fe Ry., Topeka, Kan.

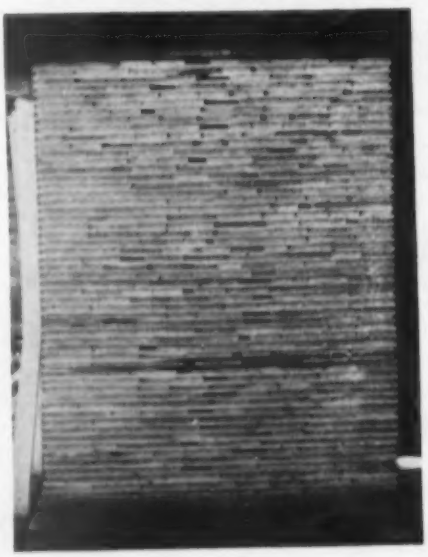
First Vice-President — P. B. Mayfield, Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Second Vice-President — G. Q. Lumsden, Bell Telephone Laboratories, Inc., Murray Hill, N. J.

Executive Committee Members — D. L. Davies, Technical Dept., Wood Preserving Div., Koppers Co., Inc., Orrville, Ohio; L. P. Drew, Union Pacific Railroad, Omaha, Neb.

Other previously elected and continuing to serve as executive committee members are: A. M. Deiters, Southern Wood Preserving Co., East Point, Ga.; J. M. Gurd, Timber Preservers Ltd., New Westminster, B. C.; B. D. Howe (Past President, AWPA), Louisville & Nashville Railroad, Louisville, Ky.; L. J. Jacobi, Inspection and Standards, Detroit Edison Co., Detroit, Mich.; L. W. Kistler, St. Louis-San Francisco Railway Co., St. Louis, Mo.; Noel E. Kittell, Joslyn Mfg. & Supply Co., Franklin Park, Ill.

ARE YOU SHIPPING GREEN LUMBER? If You Are, You Already Know The Advantages of Modern Kilns!



Whether your requirements are large or small—whether you wish to dry many species and thicknesses, or only wish to dry for shipping weights—there is a Moore Kiln designed especially for your requirements and within your budget.

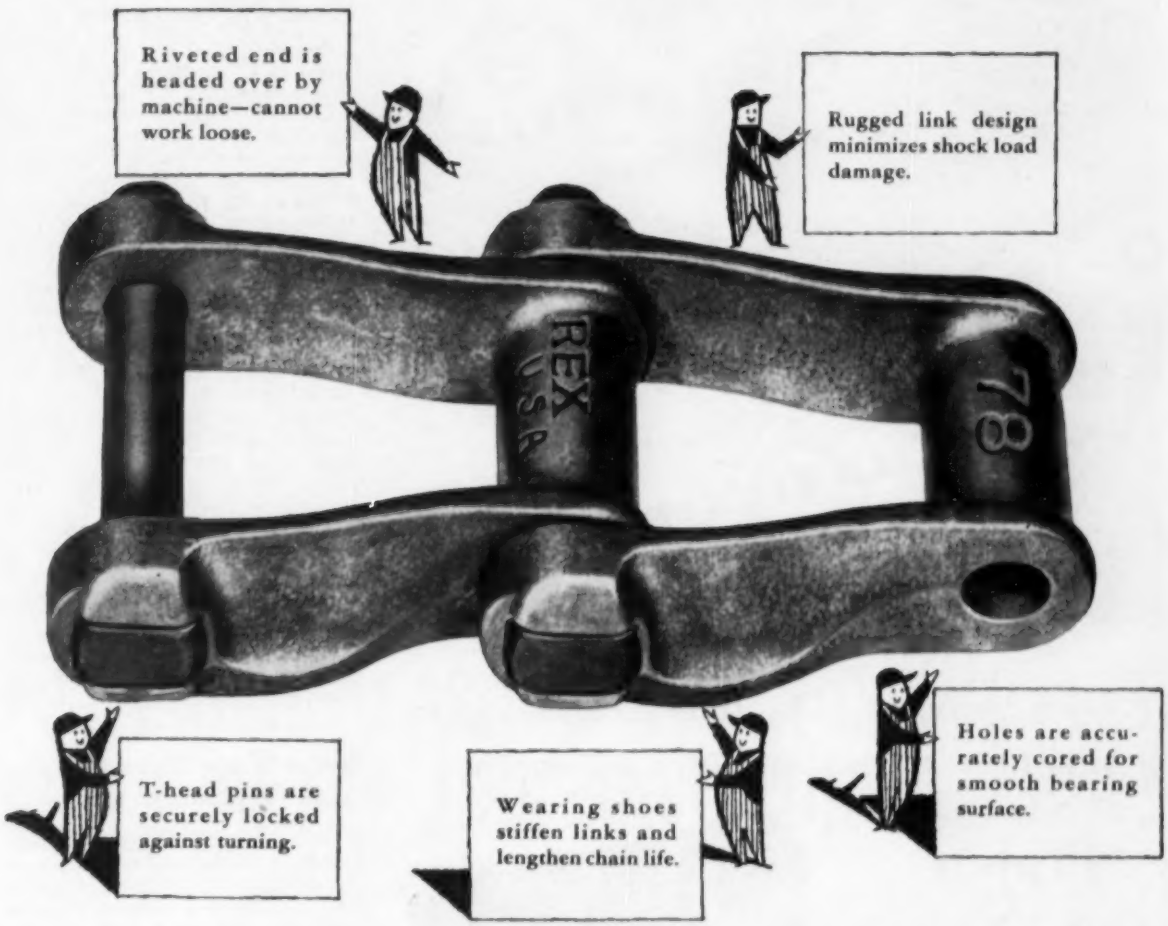
Dry kilns, like automobiles, are built in many sizes and models—from the Jeep to the Cadillac. We can furnish you with the size and type dry kiln you want and within your price range.

Write our nearest factory for complete facts, specifications and prices on kiln facilities best suited for your need. No obligation, of course!

MOORE DRY KILN COMPANY

Oldest and Largest Manufacturers of Dry Kilns and Veneer Dryers

JACKSONVILLE FLORIDA · BRAMPTON, ONT. CANADA · VANCOUVER, B. C. CANADA · NORTH PORTLAND OREGON


Riveted end is headed over by machine—cannot work loose.
Rugged link design minimizes shock load damage.
REX
U.S.A.
78
T-head pins are securely locked against turning.
Wearing shoes stiffen links and lengthen chain life.
Holes are accurately cored for smooth bearing surface.

sawmill work horse

Rugged as it looks and reinforced at just the right places to shrug off the wear and shock impacts of lumber mill service, you'll find Rex® H-Type Mill Chain your number one choice for feeding your saw carriages and transferring duty to your edgers, trimmers or sorters. The service is tough, and this riveted mill chain is tougher. The result: Rex reliability plus Rex stamina equals Rex economy.

Rex H-Type Mill Chain as illustrated above is available in malleable iron or wear-defying Z-metal in all required sizes. In many applications it is used plain; standard attachments make it adaptable to trimmer table or slasher service.

For Rex H-Type Mill Chain and for the many other conveyor and drive chains used by the forest products industry, see your CHAIN Belt District Sales Engineer or Distributor. You will be served rapidly and efficiently from local stock. CHAIN Belt Company, 1653 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN BELT COMPANY

Your ONE source for a complete line of power drive and conveyor chains, sprockets, roller bearings, flexible couplings.

Friden Creates A New World For Business

TALLY SHEETS

PAYROLL

COST FIGURING

INVOICING

. . . click through ALL lumber calculations this fastest, simplest, fully automatic

Friden Calculator Way

It's called THE THINKING MACHINE OF AMERICAN BUSINESS and you'll know why when you try it on your toughest figuring jobs! In thousands of sawmills and lumberyards, the fully automatic Friden Calculator is standard equipment. It performs more steps in figure-work without operator decisions than any other calculating machine—can be used by anyone with only the simplest instructions. Ask the Friden Man in your area for a demonstration. Friden sales, instruction, service throughout U.S. and the world. Friden Calculating Machine Co., Inc., San Leandro, Calif. Commercial Controls Corp., Rochester, N.Y., Subsidiary.

Friden brings you an automatic office

Californian Heads Wood Preservers Group

• General sales manager, W. W. Jackson, J. H. Baxter & Co., San Francisco, Calif., was elected chairman of the board of directors of the American Wood Preservers Institute at its recent annual meeting in Chicago, Illinois.

One of his first official acts was to expand to nationwide proportions a campaign designed to help highway engineers build safer, less costly roads. The campaign is timed to become part of the national road building program, for which needed expenditures are estimated at $101 billion, to extend a network of highways through every state.

He urged more use of pressure-preserved wood guard rail posts, pressure-preserved wood in bridges and pressure-preserved wood posts in right-of-way fencing.

The American Wood Preservers Institute, a non-profit educational organization representing the wood preserving industry, now is preparing a new "Highway Guide." It will give engineers detailed, illustrated information on proper uses of pressure-preserved wood in highway and bridge construction.

Better Wood Utilization Basis for Sumner Orders

• Sumner Iron Works, Everett, Wash., reports orders for timber industry installations all over the world. Recently they manufactured chippers for Australia and Tasmania; hydraulic log splitters for New Zealand; chippers for France and Brazil; chip screens for Newfoundland; and chipping equipment for Quebec, Ontario and Saskatchewan mills.

A new use has been found for their recently developed Chipmaster screens, viz., the recovery of usable chips from the refuse that is normally sold as sawdust for household fuel. At the Canadian White Pine Division of MacMillan & Bloedel Ltd., a Chipmaster No. 54 screen was recently installed. Between 10 and 15 units of the accumlated refuse from under the head-saw, gang-saw, edgers and cut-off saws are passed on to this screen, resulting in 3 to 4 units of usable chips per shift being obtained from this waste.

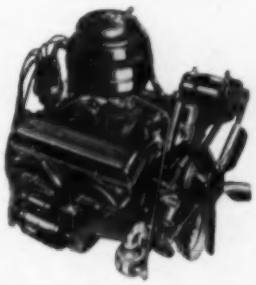
The screen plates used are: Top 5/8" wire mesh, and bottom 7/16" wire mesh. This screening process serves the dual purpose, not only of increasing income from usable chips, but also of providing splinter-free sawdust that will not clog the hoppers in household sawdust burners.

POWERFUL REASONS WHY A CHEVROLET STAYS ON THE JOB...SAVES ON THE JOB!

COMPACT CHEVY V8

(weighs up to 150 lbs. less than others)

- Shortest stroke of any truck V8
- Short, durable connecting rods
- Vertically compact cylinder block
- Rugged yet light crankshaft
- Efficient hydraulic valve lifters
- Long-wearing Moraine bearings



Chevrolet trucks are powered by V8's that make every ounce count. Because of their trimmed-down design, they use less power to haul their own weight and put more power into hustling your cargoes. Like all Chevrolet truck components, these engines are efficient performers—and that means top economy and dependability!

Chevy's the dollar saver *de luxe* of the American road, and many of the reasons why can be found beneath the Chevrolet truck hood. That's where you'll often find a great V8 that's at the head of its class for compact, *efficient* short-stroke design. You won't find features to equal all those listed here (at left) in any other truck V8's today. Or, if you prefer a 6, Chevy's got the most popular 6-cylinder powerplants in the history of hauling. They're honest-to-goodness *truck* engines, specially built to *stay* and *save* on rough, tough hauling jobs.

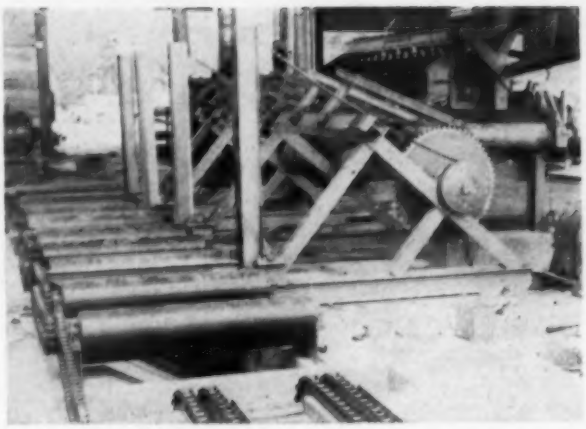
You'll find that a Chevrolet truck gives you *so much* to save with! Your Chevrolet dealer is waiting to fill you in on all the facts. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Biggest sellers . . . because they're biggest savers! CHEVROLET

CHEVROLET TASK·FORCE 57 TRUCKS

a breakdown hoist that's ready for work!

no installation problems



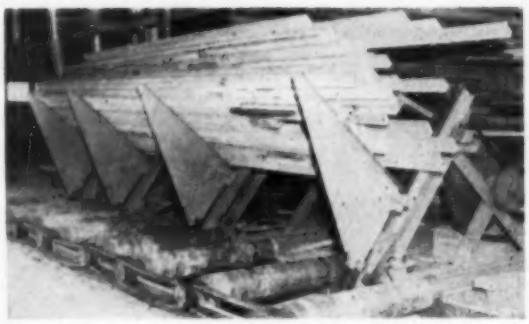
No millwrighting or installation problems—A PORTLAND IRON WORKS Breakdown Hoist is ready for work the moment it is placed on your foundation. Even the angle of set was determined through careful research by qualified engineers. Their aim . . increased production!

keeps working – RIGHT!

PORTLAND IRON WORKS Breakdown Hoists are designed for a lifetime of *smooth, fast, one-man operation.*

Brass shoes replace cumbersome rollers at points of stress. Rubber shock pads ease columns into position; minimize wear, reduce costs.

Buy the Breakdown Hoist that's ready for work and *keeps* working . . . from PORTLAND IRON WORKS.



PORTLAND IRON WORKS INCORPORATED

1335 N.W. Northrup Street
Portland 9, Oregon
CApitol 7-1107
Teletype PD565

experience is our best designer

ENGINEERS
MACHINISTS
FOUNDERS
ESTABLISHED 1882

Film Speeds Home Building

Builders of 7,000 new homes in Carpenterville, Ill., estimate they save 50 per cent in labor and time of installing vapor barriers by using film made from Bakelite polyethylene instead of conventional building papers. Five school buildings for this Meadowdale Subdivision will also use the low-cost film barriers, and so will the development's 102 stores which will form the world's largest shopping center under one roof.

Polyethylene film used at Meadowdale is supplied by Visking Company, Terre Haute, Ind. Specially cut sheets .004 of an inch thick, 24 feet wide and 40 feet long are employed. Two sheets of Visqueen film are used for homes. Two men can easily install the large sheets of polyethylene film, where four men were needed to handle conventional building papers and tar needed to seal joints.

Film is used to speed the curing of concrete and to protect concrete foundations from moisture in the ground fill. Bakelite polyethylene resins in film form have an extremely low rating of moisture vapor transmission and resist deterioration in direct contact with moisture. In homes with wood-beam construction, film is placed between floor beams and subflooring, shown in photo. This film barrier prevents moisture from rising through the floor to cause paint streaks or blisters on walls, warped base boards and mildewed rugs or furniture.

At temperatures well below zero, Bakelite polyethylene still retains its moisture-resisting properties and remains flexible for easy handling. For these reasons builders use the film as a protective cover for materials stored out of doors. Film is stapled over open window areas to keep out rain and snow but to let in enough light for work to proceed. Entire houses have been covered with polyethylene film to protect unfinished work from damage by sudden storms.

Bob Wagner
Chief Engineer
Hiller Helicopters, Palo Alto, Calif.—Manufacturers of Hiller Designed Vertical Take-off Aircraft

Our Telephone Opens New Horizons in Product Design

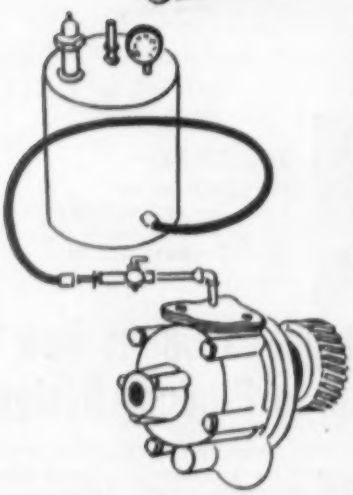
"New concepts in design, like the Tilt-Wing Propelloplane, take a lot of planning . . . and telephoning. With Conference Calls, for example, we link Project Engineers and executives from coast to coast on the same telephone line. And every day we coordinate work on big contracts with a few out-of-town phone calls. We might otherwise have spent weeks and several thousands of dollars on travel."

Opening new horizons for all kinds of products is one of many ways in which the telephone is helping firms like Hiller become leaders in their fields. We'd like to suggest other ways to make out-of-town calling more profitable for you. Our staff of Long Distance specialists is at your service. Just call your telephone business office.

Working together to serve you better

Pacific Telephone

That part your truck needs may be one in a million... but it's right here within arm's reach of Roberts parts specialists and they'll get it to you *fast!* Parts are rushed to you from the Northwest's largest stock of truck and industrial parts... *literally millions* of genuine replacement parts to match the precision of the originals in your truck. No *time* wasted either, waiting for replacement parts, when your truck's in Roberts' shop. Saves on down-time ... and costs ... on a simple repair or a complete rebuild.



Here's another Roberts labor-saver that gets the job done faster, which means a saving to you! With this machine, a water pump or oil pump can be tested after overhaul, right on the bench, without installing on the motor ... tests at twice the operating pressure which insures plenty of margin for safety.

PHONE
BEImont 4-6661

ROBERTS
MOTOR COMPANY
123 N. E. PACIFIC STREET • PORTLAND, OREGON

TVA Reports On Sawmill Operations

• A comparison of sawmill operations in the Tennessee Valley over a five-year period shows a reduction of lost time, increased production per day and per man, better equipment, and smaller, poorer quality logs.

In 1950 TVA forecasters studied a 58-mill sample of the 1,200 circular mills in the Valley that account for 85 per cent of the total lumber production. In 1955 they resampled this same population, using 39 of the original mills and 19 substitutes.

The resurvey showed a reduction of 27 minutes in non-productive headsaw time—120 minutes lost in 1950, 93 minutes in 1955. More than a fourth of the sample mills lost less than an hour in 1955; the top 10 per cent averaged only 23 minutes.

Average mill-day production increased from 5,824 to 6,726 board feet; man-day production went up from 968 to 1,123 board feet. In terms of annual output, this means average mill production went up from 688,000 to 822,000 board feet.

Number of diesel power units increased 10 per cent; gasoline engines decreased about 10 per cent; electric and steam units stayed about the same. Average horsepower was 76 in 1950, 88 in 1955. Size of headsaw increased from 54 inches to 56 inches, on the average. Number of edgers increased eight per cent.

Average size of logs, however, decreased almost an inch in diameter and dropped from 57 to 45 board feet in volume. Quality of logs was also lower in 1955; only 3.6 per cent were grade 1 as compared with 7.7 per cent in 1950. The proportion of No. 1 Common and Better lumber dropped from 28.7 to 21.6 per cent.

In 1950, only seven mills purchased selectively marked stumpage, seven cut to a diameter limit, and 49 bought stumpage by the boundary. In 1955, 17 were buying marked timber, seven cut to a diameter limit, and only 34 bought by the boundary.

The trend is toward more permanent mills, a better balance of manpower and equipment, and improved management. Improvements made in the sample mills between 1950 and 1955 indicate a wage saving for the industry of about $500,000 a year and a production increase of 160 million board feet a year.

• Latest surveys indicate that a properly planned and designed one-story school built of wood is safer for children than the best three-story fireproof school, according to the West Coast Lumbermen's Association. Not only are single-story wood frame schools less expensive, but they are more like the atmosphere of the child's home and therefore less foreboding and more reassuring.

Twenty five ton lifting capacity!
Handles easily . . . fast on the highway . . . and

STRIPS QUICKLY, EASILY TO MEET HIGHWAY WEIGHT LIMITATIONS

"These are the four main reasons we bought our new 25-ton Michigan Truck Crane," says Pete Smith, Secretary of Emmerson Truck & Storage Company, Battle Creek, Michigan . . . "and the four main reasons we like it so much today. Results of the past eight months of work certainly justify our selection!"

Reaches for the sky—or into a building

Photo illustrates one of the "results." Here, with 85 ft boom and 15 ft jib, Emmerson lowered an old 2½-ton (8' high, 3' wide) commercial blower from the roof of Kellogg's Battle Creek plant. Entire assignment took just a few hours, including time for the Michigan Crane to drive 3 miles through town to the world-famous cereal factory *and* time to transport the blower to Kellogg's yard several blocks away. *Cramped quarters,* on the other hand, have proved equally accessible. With a very short boom-end (made in the Emmerson shop) to reduce boom length to 17 ft, the Michigan sets machinery *inside* plant buildings. Negotiating doors as small as 8½ ft wide by 12 ft high, the Michigan drives right in where many 25-ton cranes can't go.

Handles 3-ton horizontal lifts in muck

Another "toughie" the Michigan took in stride was the laying of new 12" gas main under a new river channel. Here, the boom was used *absolutely horizontal*—45 feet out—while the Michigan maneuvered 3-ton pipe sections into place. *Biggest* load lifted to date was a 25-ton press. *Highest* loads have been 5,000 lb buckets of concrete—100 feet up! Some of the *hardest* have been in ankle-deep mud . . . setting huge roof joists, for example. Even at night, with boom flood-lit by portable chassis-mounted generator, Emmerson has set transformers and regulators for Consumers Power & Light Co.

"Performs beyond expectations; not one complaint!"—President

"We're very pleased with our Model T-24 Truck Crane," says Bob Sergeant, President and General Manager of Emmerson. "It's performed beyond our expectations; we haven't one complaint. This Michigan has done everything the manufacturer said it would—*and more!*"

Why don't YOU look into the advantages of a Michigan Truck Crane? Write for new illustrated booklet on the Model T-24 25 Ton Truck Crane. Get the facts, today!

Michigan is a registered trademark of
CLARK EQUIPMENT COMPANY
Construction Machinery Division
2483 Pipestone Road
Benton Harbor 38, Michigan
In Canada: Canadian Clark, Ltd.
St. Thomas, Ontario

CLARK® EQUIPMENT

Industry Considers Schools As Outlet for Lumber

SPOKESMEN FOR THE NATION'S lumber producers called on Congress and the Administration to cut taxes and federal spending and end all government subsidies not vital to national security.

Concluding a three-day Spring Meeting in Boston, Mass. on May 13-15, directors of the National Lumber Manufacturers Association also appealed for legislation which would:

- Ban compulsory unionism.
- Curb union "terrorism" in labor-management disputes.
- Make the unions subject to existing anti-trust laws.
- Repeal federal statutes regulating wages and working hours in private employment.

NLMA directors urged these reforms in adopting a new 3,000-word policy statement bolstering the association's stand on a wide range of public issues.

Central theme of the new policy declaration was a call for less government control and greater reliance upon "private initiative, individual responsibility and sound economic principles."

Special attention was given to the dangers of inflation.

A SECTION ON FOREST POLICY reaffirmed the lumber industry's position in behalf of sound forest management practices, maximum utilization of the nation's forest resources and a minimum of federal interference with industry operations. Directors also set the stage for possible expansion of the lumber industry's research, merchandising and wood school promotion efforts.

A highlight of the meeting, was a panel discussion of the factors responsible for growing popularity of one-story wood schools. Participating were architect-engineer Alonzo J. Harriman of Auburn, Me.; lumberman John B. Veach of Asheville, N. C., and architect-lumberman W. Jeter Eason of Memphis, Tenn. Moderator was NLMA president Walter M. Leuthold.

Harriman called for more research on the dimensional stabilization of wood products; greater off-site preassembly of building parts; more emphasis on design and fabrication in modular units; improvement of wood's fire resistant properties, and development of shapes and structural sections using wood to best advantage.

The architect-engineer also recommended that wood school promotion efforts put greater emphasis on the natural and inherent advantages of wood.

VEACH CALLED ON THE LUMBER industry to undertake an aggressive wood school promotion program and identified several communities in which he said wood schools could help to solve a classroom shortage.

Eason underscored several of the obstacles the lumber industry must overcome in promoting wood school construction. "Wood, because it will burn, is generally considered to be more hazardous than steel-frame," he pointed out. "A wood-frame wall, with fire stops properly placed and protected with ½-inch plaster, will receive the same fire rating as a light steel-frame wall with ¾-inch plaster protection."

George M. Rideout, business analyst and vice president of Babson's Reports, Inc., predicted that the physical volume of business in 1957 will be at least the second best on record and may equal the all-time high of 1956.

Rideout also forecast a further rise in interest rates, increased competition at the retail level and a stepped-up merger rate.

The business expert looks for generally good times to continue for the next 10 years but warned that union demands for higher wages and shorter working hours could set off a recession earlier. One indicator of a possible recession, he declared, would be a downturn in new credit obligations.

RIDEOUT SAID PROSPECTS are bright for more wood schools, a continuation of the trend to suburbia and a further growth in do-it-yourself activities. But he urged the lumber industry to prepare for an eventual business downturn.

Other events of the session:

- Special plaqes were presented to NLMA board chairman Lawrence Kellogg for his services as president of the association in 1956 and to Leo V. Bodine for his achievements as executive vice president of NLMA from 1952 through 1956.

- A. L. Helmer of the Polson Lumber Co., Polson, Mont., was elected a director of the association and a member of NLMA's Executive Committee, representing the Western Pine Association. Elected alternate directors of NLMA were Joseph L. Noyes, Marshall Lumber Co., Marion, N. C., and A. T. Hildman, Michigan-California Lumber Co., Camino, Calif.

New regional vice presidents of NLMA are A. B. Hood, president, Western Pine Association; Q. T. Hardtner, Jr., president Southern Pine Association; E. R. Thomas, president Southern Hardwood Producers, Inc.

The BROOK is the motor you can INSTALL AND FORGET!!

Because it is no ordinary motor—the stator, rotor, windings, electrical varnish used and the bearings are designed and selected to give long, trouble-free service under the toughest conditions. Yet, BROOK MOTORS cost no more than ordinary motors—usually they cost less. No wonder so many mills, gins, quarries, factories, petroleum producers and others using BROOK MOTORS praise them so highly. Send for construction feature Bulletin 827.

Open Drip Proof (shown), Totally Enclosed Fan Cooled, Totally Enclosed Non-Ventilated, NEMA "C" and "D" Flange, Extended Shaft Pump Motors, Special Motors, Squirrel Cage or Slip Ring, stocked in a wide range of sizes.

FAST DELIVERY OF ALL POPULAR MODELS:

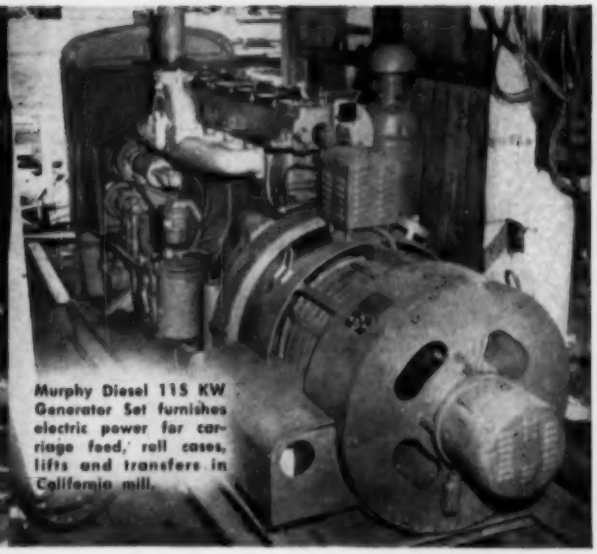
Brook Motors are available from warehouse at Chicago, Dallas, Jersey City, Los Angeles, Memphis, St. Paul, Salt Lake City, San Francisco, Atlanta, Seattle, Tampa, and other major distributing points.

SINCE 1904

BROOK MOTOR CORPORATION

3553 W. PETERSON AVE., CHICAGO 45, ILL.

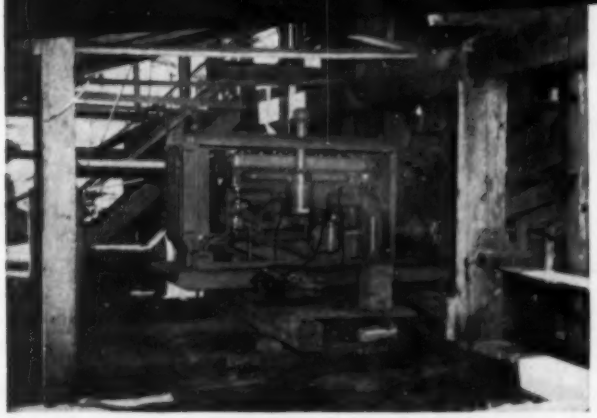
This 96 HP (continuous) Murphy Diesel in a Massachusetts mill assures easy, instantaneous starting and immediate, positive response.



Murphy Diesel 115 KW Generator Set furnishes electric power for carriage feed, roll cases, lifts and transfers in California mill.

MURPHY DIESEL POWER

in your mill means *MORE* board feet per gallon of fuel



Murphy Diesel 150 HP (continuous) enclosed power unit drives an Oregon sawmill. Murphy's are famous throughout the lumber industry for their dependable lugging power and instantaneous response to load change.

3641

MURPHY DIESEL

Heavy-Duty Power

for sawmills

Murphy Diesel Engines and Power Units available in sizes from 96 to 264 HP. "Packaged" generating units available in capacities from 64 to 165 KW.

MURPHY DIESEL COMPANY

5351 W. Burnham St. Milwaukee 14, Wisconsin

Sales, Parts, Service in Principal Cities

Whenever the skyline is busy, the Stacker moves in and quickly dozes big logs from the off-highway trucks.

Logs which do not go directly to the bucking areas are quickly sorted and decked as much as ⅛ mile away.

At the Hollow Tree Lumber Company...

LETOURNEAU ELECTRIC ELEPHANT

Big redwood and fir logs pour into Hollow Tree's mill at Annapolis, California, by off-highway truck — and emerge as lumber at better than 100,000 board feet per day. Getting these logs sorted in decks and dealt out to the hungry saws in the proper grade and species at the proper time is a job for a giant! For that job, Hollow Tree uses the big and tough LeTourneau Electric Log Stacker.

At a grueling pace, 9-hours-a-day, this versatile log handler unloads trucks and loads trailers, sorts to the proper decks, feeds two bucking areas, and makes quick work of other jobs where elephantine power is called for. Together with a small lift truck it feeds logs to the mill table and builds up a deck of bucked logs to keep the mill humming.

LONG HAUL FROM DECKS

The topography at Hollow Tree's mill "B" forces location of some cold decks 700 to 800 feet away from the mill approaches. The Stacker's ability to shuttle 40-foot logs back and forth to these decks, 3500 to 4000 board feet per trip, is the key to the pell mell pace set by this busy mill. Even in seasons when these decks are all but isolated by heavy, deep

Here's a big log that's fit only for pulp. When enough of these accumulate, the Stacker loads them out.

In addition to other chores, the Stacker builds an extra deck of bucked logs to assure continuous operation of the mill.

Powered steel tusks assure a safe trip across the rutted mill yard.

"SHUFFLES AND DEALS"

mud, the big LeTourneau Log Stacker barely slows down in its job of dealing logs to the proper decks and bucking areas.

ELECTRIC POWER DOES THE JOB

Power and versatility for complex mill yard operations like that at Hollow Tree Lumber Co. is possible only with the exclusive LeTourneau System of Electric Power and Control. This system—in which all machine functions are independently powered by individual electric motors—brings full power of a big diesel-electric power plant into focus directly on the job of handling big loads.

Precise control of the Stacker's boom and forks speeds up the job of feeding bucked logs to the mill table.

SEE IT IN ACTION

LeTourneau Electric Log Stackers are working today not too far from you. Ask your LeTourneau distributor to show you one in action . . . or let him show you the new sound film, "Giant In The Yard." In it you'll see how Hollow Tree and other mills have solved the problem of moving heavy log loads fast, anywhere in their yards. For free literature on the Stacker, just mail the coupon below..

Employment Opportunities

LeTourneau Logging Equipment Division is currently expanding its staff of logging specialists: Sales Management, district representatives, field engineers, service men. If you have a background of successful, productive experience in this field and you are looking for an opportunity where you can move up, send your qualifications to Mr. Hobson Tune in care of our Logging Equipment Division.

LET R.G. LETOURNEAU INC

L-126

Logging Equipment Division
2546 South MarArthur, Longview, Texas

Send me your folder describing the Electric Log Stacker.

Name_____

Firm_____

Address_____

City and State or Province_____

Mt. Pierce Logging Co., Fortuna, California, gets

More Payload per Trip... More Trips per Day!

Cost savings, typical with

AUTOCAR

In cost records, Autocar shows up as a consistent profit maker, bringing in bigger payloads, more often, and with minimum down time. No wonder Autocar's so popular in the timber and lumber industries where ruggedness in hauling equipment goes hand-in-hand with profitable operations. Learn now how Autocar can do a job for *you*...get all the facts...*specific* facts on transportation cost savings, typical with Autocar. Call your local Autocar Representative today!

Autocar Division
THE WHITE MOTOR COMPANY
EXTON, PA.
Sales and Service Facilities Everywhere

One of five Autocars, owned by Ed. Hampton's Mt. Pierce Logging Co., Fortuna, California, pulling into the Voss Lumber Co. log-pond after a 53 mile haul out of the Bear River Area. The Autocars and Page trailers make three trips per 12-hour day.

Ocean Rate Cuts Aid Lumber Trade

• Ocean freight rates, one of the main obstacles to increased overseas lumber sales, are levelling off to a point which may re-vitalize British Columbia's lucrative lumber trade.

Bulk charter rates for ocean ships, bolstered by shortages due to the Suez outage, had jumped to a peak which had backed B. C. lumber out of the world markets. Buyers couldn't pay the freight rates which had jumped as high as 450 shillings per thousand board feet between Vancouver and Great Britain.

In comparison, two years ago, the rate was about 200 shillings a thousand.

Today they have dropped to around 325 shillings a thousand.

Even at today's lower rate B. C. won't be able to compete against the nearby Baltic countries for the United Kingdom market.

It is expected to put B. C. lumber in a more favorable position in such countries as Australia and Japan, both of which had been going slow on lumber sales while the rates were high.

The levelling off has been due to the fact that fewer ships are now needed for the long detour necessitated by the closure of the Suez Canal and an easing of the long-term contracts for coal and grain haulage.

The inflated charter rates has meant that wartime-built freighters, which a few years ago were selling for $600,000, have been selling recently for as high as $1,600,000.

The inflated rates has also meant Vancouver lumber shipments nosedived from 25,000,000 board feet in December, 1955, to 14,500,000 board feet in December, 1956.

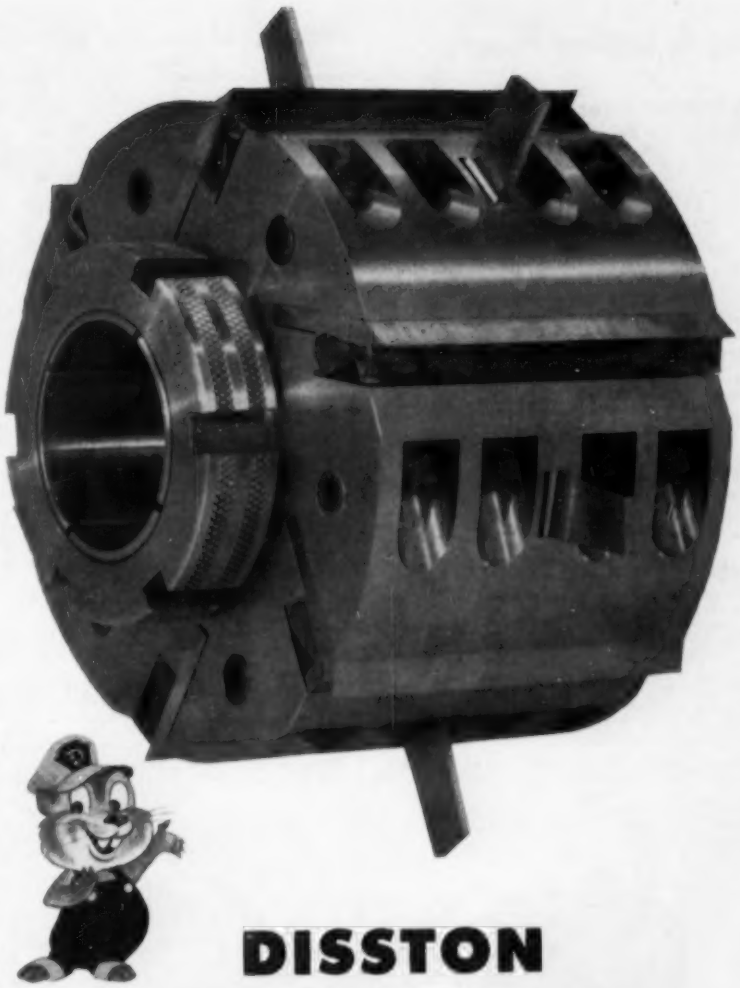
Oregon-Pacific Expands

Oregon-Pacific Lumber Co., wholesale distributor of west coast lumber throughout the United States and Canada, has launched a $60,000 expansion of existing warehouse and office facilities at Portland, Ore.

Expansion has been necessitated by a heavy business increase in the Oregon-Pacific Plywood Corp., affiliate of Oregon-Pacific Lumber. Oregon-Pacific Lumber Co. distributes nationally on a carload basis for approximately 200 mills from Canada to California.

Construction will include addition of 10,000 square feet to the warehouse, bringing those facilities to 25,000 square feet of storage space for imported and domestic plywoods, cedar products and other specialty lumber items.

The modern offices, which presently include 3,000 square feet finished in modern decor featuring numerous western woods, will be enlarged by approximately 1500 square feet.



©HKP

DISSTON CUTTER HEAD

surfaces and splits 1" lumber

in one operation

The splitters in the specially-designed Disston Cutter Head shown here are clamped against a ground surface.

The head is made of two pieces permanently assembled after the splitter pockets have been machined.

Disston's exclusive manufacturing method makes it possible to grind in one plane the surface against which the splitters are clamped, eliminating the necessity of adjusting the splitters for alignments.

If you'd like more information about Disston Cutter Heads, see your Disston distributor today.

GOT A CUTTER HEAD PROBLEM? We'll be happy to supply you with any information you need on the application of Disston Generated Type Cutter Heads to your specific problem.

Write: *Henry Disston Division*
H. K. Porter Company, Inc.
Philadelphia 35, Pa.

HKP Henry DISSTON DIVISION
H. K. PORTER COMPANY, INC.

Log & Lumber Prices

Columbia River Log Prices

Douglas Fir Peelers: No. 1 $112-117; No. 2 $103-108; No. 3 $75-80.

Douglas Fir Sawlogs: No. 1 $64-69; No. 2 $51-56; No. 3 $42-47.

Hemlock: Peelable $59-64; No. 1 $55-60; No. 2 $43-48; No. 3 $39-44.

White Fir: Peelable $58-63; No. 1 $55-60; No. 2 $45-50; No. 3 $43-48.

Noble Fir: Peelers $58-63; No. 1 $56-61; No. 2 $53-58; No. 3 $43-48.

Cedar: No. 1 $93-98; No. 2 $37-42; No. 3 $35-40.

Spruce: Select $103-108; No. 1 $80-85; No. 2 $52-57; No. 3 $37-42.

Grays Harbor Log Prices

Douglas Fir Peelers: No. 1 $108-113; No. 2 $98-103; No. 3 $81-86.

Douglas Fir Sawlogs: No. 1 $60-65; No. 2 $58-63; No. 3 $43-48.

Hemlock: Peelable $58-63; No. 1 $53-58; No. 2 $41-46; No. 3 $39-44.

Cedar: No. 1 $78-83; No. 2 $46-51; No. 3 $34-39.

Spruce: Select $88-93; No. 1 $63-68; No. 2 $45-50; No. 3 $42-47.

White Fir: Peelable $58-63; No. 1 sawlogs $53-58; No. 2 $42-47; No. 3 $41-46.

Puget Sound Log Prices

Douglas Fir Peelers: No. 1 $108-113; No. 2 $98-103; No. 3 $82-87.

Douglas Fir Sawlogs: No. 1 $63-68; No. 2 $56-61; No. 3 $39-43.

Hemlock: Peelable $58-63; No. 1 $53-58; No. 2 $41-46; No. 3 $37-42.

White Fir: Peelable $59-64; No. 1 $54-59; No. 2 $42-47; No. 3 36-41.

Noble: Peelable $.....; No. 1 $63-68; No. 2 $53-58; No. 3 $41-46.

Cedar: No. 1 $83-88; No. 2 $49-54; No. 3 $36-41.

Spruce: Select $87-92; No. 1 $62-67; No. 2 $40-45; No. 3 $38-43.

British Columbia Log Market

Reported by C. D. Schultz & Co., Ltd., Vancouver, B. C., consulting foresters and engineers.

(Log prices are per thousand feet board measure.)

FIR—Log stocks are increasing and are more than double the volume on hand during the same period last year. Price range is $52.50 to $60.00 for #3's, $60.00 to $70.00 for #2's and $70.00 to $80.00 for #1's.

Peeler price has remained steady at $80.00 to $90.00 for #3's, $90.00 to $100.00 for #2's and $100.00 to $112.50 for #1's.

CEDAR—Stocks have increased slightly in the past month and are at their highest level since late last fall. Virtually no lumber cedar has been sold in the past month.

Cedar price range is now $35.00 to $40.00 for #3's, $40.00 to $50.00 for #2's, and $50.00 to $65.00 for #1's. Tie cedar has decreased slightly in price and is now $35.00 to $40.00.

HEMLOCK & BALSAM—Stocks of hemlock and balsam have shown a slight increase in the past month and are a great deal higher than in the same period last year. Hemlock price remains firm at $32.50 to $42.50 for #3's, $42.50 to $47.50 for #2's and $47.50 to $55.00 for #1's. Balsam price has decreased in the last month and pulp logs are now selling in the $35.00 to $40.00 range.

• Southern Pine Prices (KD Stock)

	BB	C	D
Vertical Grain Flooring			
1x4	205.00	200.00	195.00
Flat Grain Flooring			
1x4	155.00	150.00	130.00
1x6	175.00	165.00	125.00
Drop Siding			
1x6 No. 106	191.00	170.00	130.00
No. 116	191.00	170.00	130.00

Boards & Shiplap	1x6	1x8	1x10	1x12
No. 1	125.00	125.00	125.00	175.00
No. 2	82.00	84.00	81.00	93.00
No. 3	68.00	70.00	71.00	68.00

No. 1 Dimension	12	14	16	18	20
2x4	100.00	100.00	102.00	118.00	123.00
2x6	100.00	103.00	101.00	115.00	120.00
2x8	97.00	96.00	96.00	115.00	120.00
2x10	110.00	108.00	110.00	120.00	125.00
2x12	125.00	112.00	115.00	145.00	150.00
No. 2 Dimension					
2x4	94.00	96.00	98.00	107.00	113.00
2x6	86.00	88.00	86.00	100.00	105.00
2x8	84.00	85.00	84.00	97.00	105.00
2x10	88.00	91.00	88.00	105.00	109.00
2x12	90.00	88.00	90.00	115.00	120.00

• Douglas Fir Plywood

¼" AD SOIS .....$72/M sq. ft.

• Red Cedar (industry standard) Shingles

Royals			
No. 1	24"	4/2	$15.50
No. 2	24"	4/2	9.50- 10.50
No. 3	24"	4/2	5.00
Perfections			
No. 1	18"	5/2¼	11.50
No. 2	18"	5/2¼	7.75
No. 3	18"	5/2¼	3.50
XXXXX			
No. 1	16"	5/2	10.25
No. 2	16"	5/2	6.25
No. 3	16"	5/2	3.50- 4.00

• Douglas Fir Lumber Prices

1x8	Utility S4S KD	$ 48- 53.00
2x4	Construction Dimension S4S KD	84- 86.00
1x4	C&Btr VG Flooring KD	170-175.00
1x6	C&Btr Drop Siding KD	158-163.00
1x6	C&Btr S4S KD	170-175.00
1x8	C&Btr S4S KD	170-175.00
1x10	C&Btr S4S KD	170-175.00
1x12	C&Btr S4S KD	215-220.00
CONSTRUCTION Timbers and Plank		
3x12	6x20'	$ 83- 86.00
3x12	22x24'	88- 91.00
3x12	26-32'	96-101.00
4x4	8-20'	84- 87.00
4x4	22-24'	86- 92.00
4x4	26-32'	97-105.00
6x6	8-20'	82- 85.00
6x6	22-30'	89- 92.00
6x6	32-40'	104-107.00
8x8	8-20'	81- 84.00
8x8	22-30'	86- 89.00
8x8	32-40'	101-104.00
6x10, 8x10, 10x10, 12x12	8-20'	81- 84.00
6x10, 8x10, 10x10, 12x12	22-30'	86- 89.00
6x10, 8x10, 10x10, 12x12	32-40'	101-104.00
Crossties		58- 61.00
CONSTRUCTION Dimension (Green)		
2x4	6-24'	$ 71- 74.00
2x6	6-24'	72- 85.00
2x8	6-24'	71- 74.00
2x12	6-24'	72- 75.00
STANDARD & Btr. Boards (Green)		
1x4	6-20'	$ 49- 52.00
1x8	6-20'	61- 64.00
1x12	6-20'	61- 64.00

Western Pine Prices

PONDEROSA PINE

SELECTS S2 or 4S	4/4RW	5/4RW	6/4RW
C Select RL	$263.35	$265.71	$258.73
D Select RL	192.32	198.92	188.29
SHOP S2S	No. 1	No. 2	
5/4	133.13	100.69	
6/4	134.22	101.46	
COMMONS S2 or 4S	No. 2	No. 3	
1x8" RL	105.26	74.88	
1x12" RL	118.13	80.49	

IDAHO WHITE PINE

SELECTS S2 or 4S	4/4RW	6/4RW
Choice (C) RL	273.65	296.50
Quality (D) RL	185.62	262.85

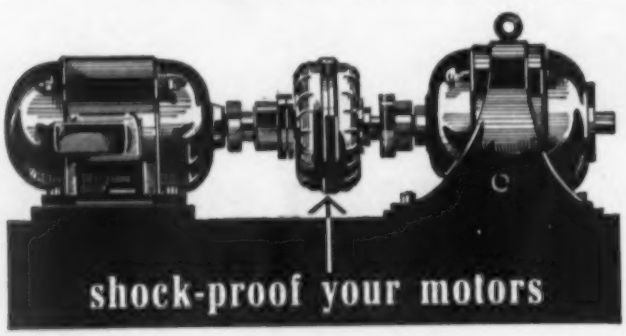
COMMONS S2 or 4S	No. 1	Colonial No. 2	Sterling No. 3	Stand.
1x8" RL		152.98	98.83	
1x12" RL		164.77	100.03	
4x4 UTILITY (#4) S2 or 4S RW&L	53.69			

SUGAR PINE

SELECTS S2 or 4S	4/4RW	5/4RW	6/4RW
#1 & 2 Clear RL	278.07	286.91	283.77
C Select RL	268.68	276.13	272.38
D Select RL	225.94	209.43	201.78
SHOP S2S	No. 1	No. 2	No. 3
5/4	138.80	104.60	72.22
6/4	141.30	105.92	72.65
8/4	150.38	113.26	76.50

LARCH-DOUGLAS FIR

4/4 #3 Common S2 or 4S	66.66
2x4 #1 Dimension RW&L	81.98
2x4 #2 & Btr. Dimension RW&L	71.67

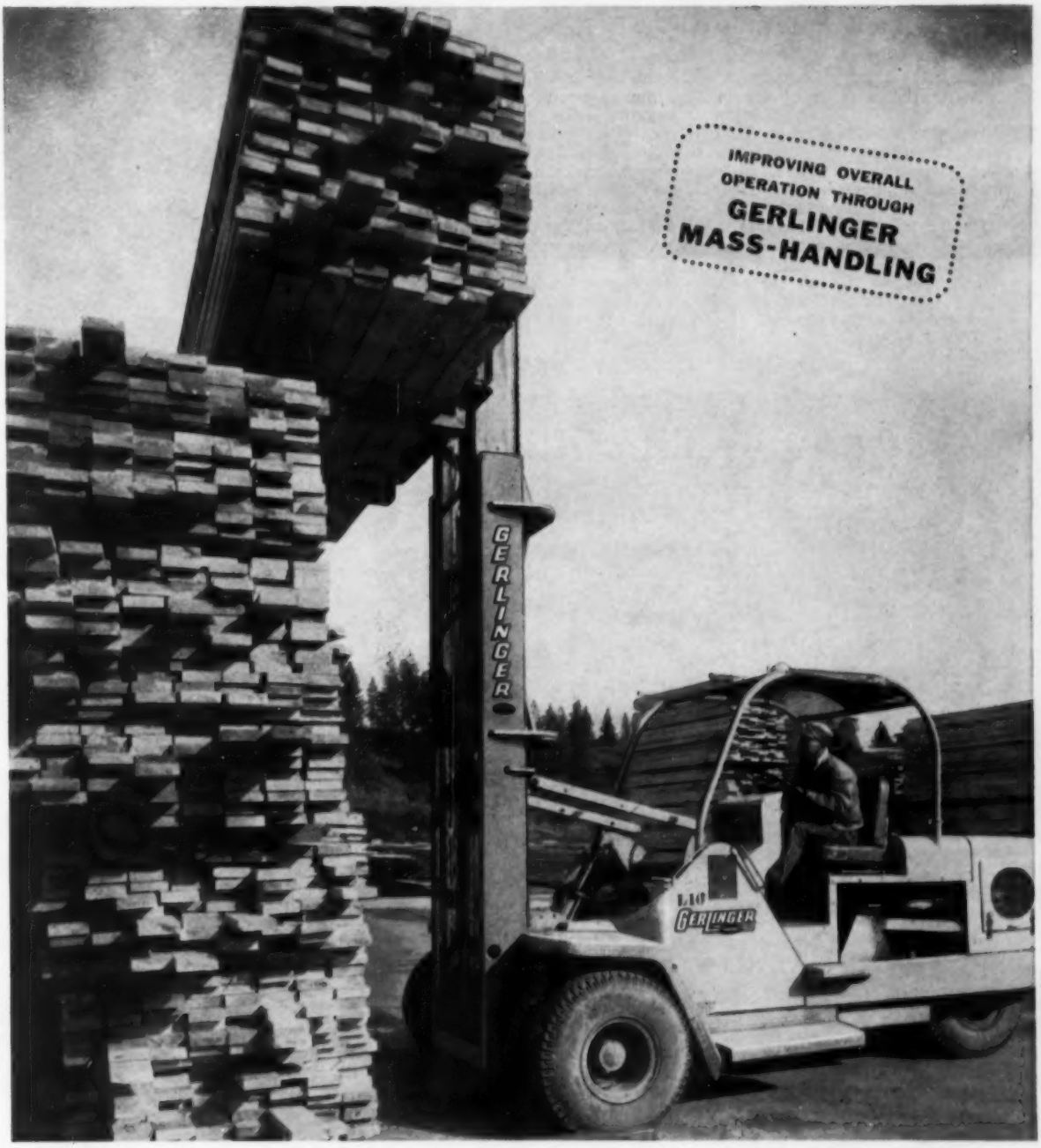


Starting shock, sudden overloads, and continued strain will weaken and kill the best machinery. TWIN DISC fluid couplings can stop this. Protect your engines and use full power safely with TWIN DISC fluid couplings. Smooth, fast, continuous performance follows their installation.

POWER TRANSMISSION PRODUCTS'
complete stock of TWIN DISC fluid couplings is as near as your phone. A qualified Engineer will evaluate your needs.

Power Transmission Products

A DIVISION OF PORTLAND IRON WORKS
1107 N.W. 14TH AVENUE, PORTLAND 9, OREGON
Call CApitol 7-1271



Releasing skilled men for other operations!

It's just simple arithmetic. Given a Gerlinger Fork Lift Truck, one man can do the work of many men. Faster, easier, safer, too. Result is *extra manpower available* for lagging operations in plants, mills and warehouses throughout industry.

Does it pay? Many Gerlinger owners say their investment starts paying dividends almost immediately!—aided by Gerlinger features like these:

- *Pivotal-Mounted Steering Assembly* —stabilized load on any road
- *One-Lever Lift-Tilt Control* —positioned for safer operation
- *Counter-Active Weight Distribution* —better traction, maneuverability
- *Heavy Duty Steel Channel Frame* —bonus years of reliable service
- *Maximum Power Torque Converter Drive*—smoother operation, less wear

New records of production and profit are the usual report when Gerlinger Fork Lift Trucks are on the job. Get latest Catalog and see how many ways you benefit with a *Gerlinger*. Write to Gerlinger Carrier Co., Dallas, Oregon.

Leaders for 38 years in building Fork Lift Trucks and Carriers

TOWMOTOR THE ONE-MAN GANG **-GERLINGER**

Gerlinger Carrier Co., Dallas, Oregon is a subsidiary of Towmotor Corporation, Cleveland, Ohio

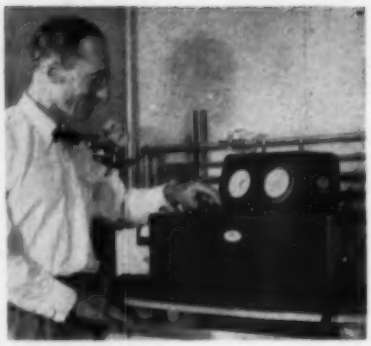
Electric Moisture Meter Checks Neils' Kilns

An automatic check on dry kiln operation at the J. Neils Lumber Co., Klickitat, Wash., is made by use of a Laucks Sentry Continuous Moisture Detector. The machine is mounted at the unstacker where it monitors the moisture content of each board as it is automatically pulled off the stack.

A metal shoe contacts each board and the electric current passing through the board is converted to moisture content — the basic principle being that less current will pass through a dryer board than one with a higher moisture content.

Boards passing the pre-determined limits are automatically marked with a drop of green ink. Those above the moisture limits are marked with red ink and are run back through the kiln. Boards under 9% moisture content are not marked and the unstacker operator notifies the kiln man who corrects his kiln schedule.

The moisture detector consists of three separate units. The detector head with its metal shoe is mounted at the top of the unstacker so that it contacts each board as it passes by. The ink jets are mounted alongside the head



CONTROLS for moisture meter are at the unstacker's operating control point.

and are remotely triggered by the electronic equipment mounted in two large boxes on one side.

The meters and control units for setting the moisture limits for marking are at the unstacker's operating control point overhead near the unstacker.

Technical maintenance of the equipment is done by Lawrence Wilson, J. Neils sawmill superintendent who has

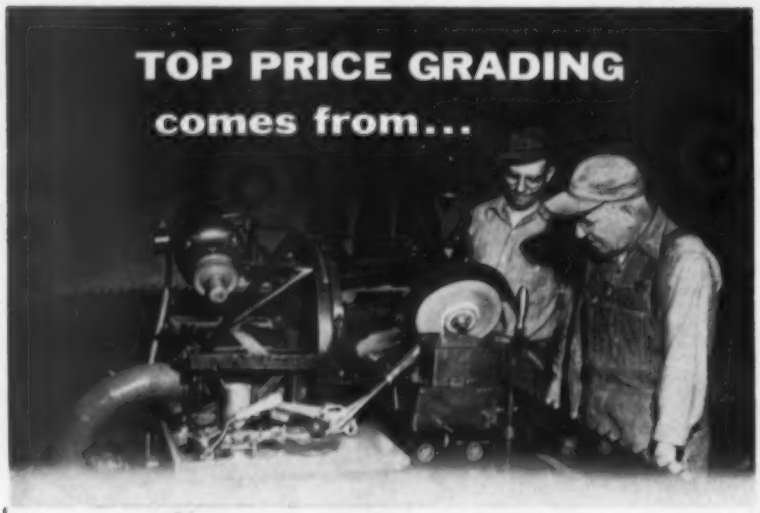
CONTACT SHOE on top of unstacker of moisture meter at J. Neils Lumber Co.

radio and television mechanics as a hobby.

The company has set up the following table for moisture control on their stock:

	Green %	Red %
4/4 Pine Common	11	17½
4/4 Pine Sel. Shop	6	13
5/4 Pine Shop & Sel.	6	13
6/4 Pine Shop & Sel.	6	13
7/4 Pine Box	11	17½
8/4 Douglas Fir Dim.	12	20

• In terms of volume of standing timber and value of products cut, the Douglas fir tree is considered the most important single commercial tree of the United States. It is noted for its great structural value and supplies the nation with much of its house framing lumber. It also has outstanding beauty and texture which makes it prized as an appearance grade of lumber for interior finish in homes and other buildings.



Armstrong PRECISION SHARPENED SAWS

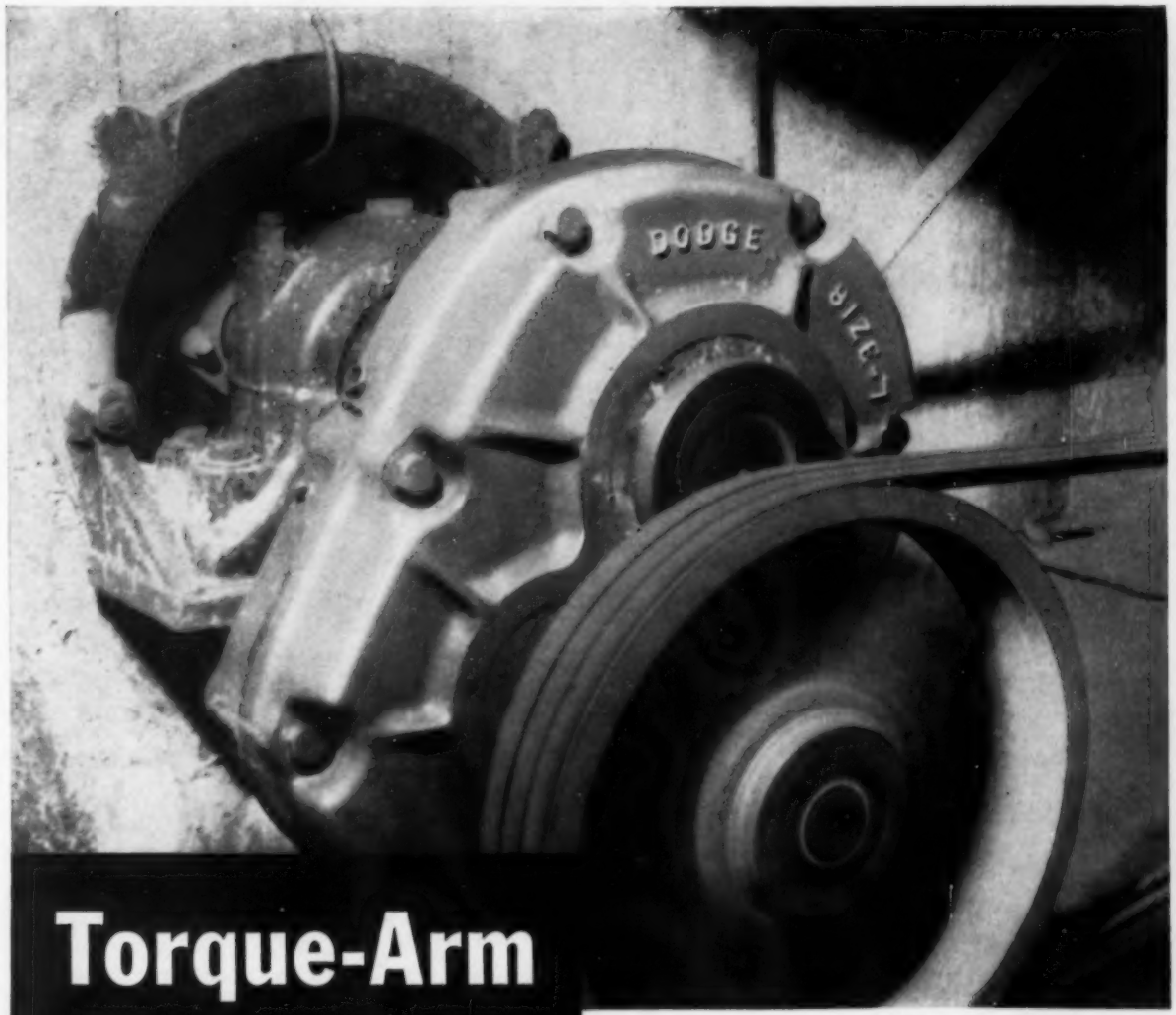
In any lumber market, soft or firm, profits come easier from select grades. The shortest way to top lumber grades is through the use of precision sharpened production saws. But merely "sharp" teeth are not enough . . . they must be precision shaped and precision sharp, the way Armstrong does it.

Write at once for full information about Armstrong automatic sharpening machinery for your filing room. There's a complete line for gang mills, band mills, circular saws.

Armstrong Association SAW SHARPENERS and TOOLS

ARMSTRONG MANUFACTURING CO.
2135 N. W. 21st Avenue Portland 9, Oregon

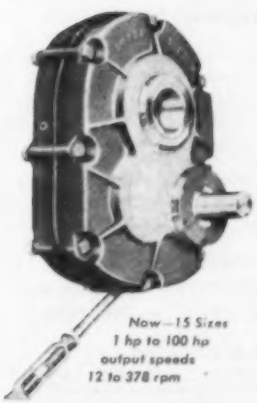
Founded in 1902 by E. P. Armstrong



Torque-Arm

SHAFT-MOUNTED SPEED REDUCERS

Save Up to 1/3 in Installation —Deliver 97% Efficiency!



Now—15 Sizes
1 hp to 100 hp
output speeds
12 to 378 rpm

Easy to install! Mounted directly on the driven shaft. Locked at both ends. Dodge Torque-Arm Speed Reducer requires no foundation, no flexible coupling, no sliding base, and there's no lining-up problem. Amazing economy is matched by efficiency in operation—up to 97%.

Unit is driven through V-belt drive. Stock Taper-Lock Sheaves prescribed for each job permit speed ratios required. Tri-Matic Overload Release and backstop available, if desired. Dodge Torque-Arm is America's most complete line of shaft-mounted Speed Reducers. Ask your Dodge Distributor—or write us.

•

DODGE MANUFACTURING CORPORATION
900 Union Street, Mishawaka, Indiana

CALL THE TRANSMISSIONEER, your local Dodge Distributor. Factory trained by Dodge, he can give you valuable assistance on new methods. Look for his name under "Power Transmission Machinery" in the yellow pages of your phone book—or write us.

DODGE
of Mishawaka, Ind.

A SEL-SET Setworks Can Automate Your Mill for More Production at Less Cost

"You Can't Beat The Best"

Write or Call

Forest Products Machinery Co.

Empire 3-3123

P.O. Box 1035 Salem, Oregon

The Fast Rigs I've Seen

By
TOM SCRIBNER

TOM SCRIBNER

THE "FAST RIG" is a sawmill carriage. To be specific, this fast rig is most generally found in the pine timber country. The whole question of fast is relative, as nearly every sawmill town from the Lake States to Seattle, Washington has the "fastest" rig either real or imagined.

These fast rigs are driven by a steam cylinder twelve to fourteen inches in diameter, and some forty to fifty feet long, which lays on the floor under the rig. It has a piston six to eight inches in diameter which is fastened on to the rig. That is the well known "shotgun feed", and, mister, those old rigs, minus all the air and electric dogs and power set works, really used to get up and dangle!

In pine lumber production, as in fir, logs are dumped in the pond and brought up the slip in to the mill for cutting into lumber.

At this point similarity between pine and fir ends, as most of the cutting in pine is done on the rig, in order to cut for g r a d e. Standard length of pine lumber is sixteen feet, and thickness rarely over two inches, so they *have* to be fast to get a cut. Other reasons for the rigs' high rate of speed are: pine is softer and smaller.

CLASSICS AMONG the fast ones from *any* place were the Cannonball, in the sawmill of the International Lumber Co. at International Falls, Minnesota; the "Blue Streak" in the Crookston Lumber Co. mill at Bemidji, Minnesota, (two block rig) and the "Kitchen Rig" in the mill of the Cloquet L u m b e r Co. at Cloquet, Minnesota. (Named Kitchen Rig because when it was added on to the mill, a Kitchen type roof was put over it).

Some western fast ones were the five rigs in the Shevlin Hixon mill at Bend, Oregon (fourteen inch shotgun feeds), and the "Fandango" mill of the Willow Ranch Lumber Co. (built in 1929 near Willow Ranch, California). That one was a fourteen inch gun that was plenty lively! Then there was the "Pony Rig" in the mill of the Seattle Cedar Lumber Co. at Seattle, Washington, a twelve inch gun, sawing cants from a headrig. No grass grew under it, either! However, none of these western rigs are in the Cannonball class for speed.

Now lets go south for a look at long leaf pine. There was the famous old mill of the Great Southern Lumber Co. at Bogalusa, Louisiana. (Four bands, five resaws, two gangs, and a twin band) four fourteen inch guns —lively!

Fastest *cutting* mill I've ever seen was the J. J. White mill at Columbia, Mississippi. Average speed rig, circular saw, lots of speed and power. I might also mention here the mill of the Williams Yellow Pine Co., Wilco, Mississippi, the Long Bell Lumber Co., Woodworth, Louisiana, and the Turner Pine Co. of Uniform, Alabama. All of these could be classed as fast rigs but not in the class of the Cannonball.

IN CASE SOME ONE might ask, "But how do you *know* about all of these fast rigs?" Here is the answer to that: I was employed as a dogger on all of them, (and a lot more) with the exception of the J. J. White mill at Columbia, Mississippi. That mill employed only colored men on the rig.

Again, some one may ask, "How come you worked on all of those fast rigs?" In explanation I will say that as just a "Mill Happy" Kid, back in 1914, I decided to find out which rig was *really* the fastest. It took several years to do that, and after working on all the aforementioned rigs, I will say that the Cannonball at International Falls, Minnesota is the (or rather, *was*) the fastest rig ever built.

This said Cannonball was a twelve inch re-bored gun and had a special boiler to provide red hot, dry steam, and was a light "Pole" rig, hand set works, boss dogs. They got the pick of long straight Norway pine poles, for dimension. That is two weeks of my life I will never forget! Seattle Cedar claimed a speed of 13,500 feet per minute for their rig. If that were so, I would say that the old Cannonball made fifteen thousand feet a minute!

Another reason for getting around so much was to try and find the rig that was "so fast that they tie 'em on". I've never found that rig, but I still hear tell of it!

At the time I was dogging on the Cannonball at the "Falls", (day shift), I used to cross the river to Fort Frances, Ont., where my brother Charles was sawing (nite shift) and would be a guest dogger for an hour or so. That rig would cant for a gang, and has put twenty five hundred logs through the mill in ten hours!

All of these statements can be verified, but I find it hard to convince Western lumbermen of these facts, and as I'm now a man of age fifty-eight, I've become weary of trying.

No Change in Standards

• The American Lumber Standards Committee at its scheduled hearing at Washington, D. C. on May 17 voted to make no change in the official Lumber Standards Document, t h i s meaning that neither the proposed maximum moisture content nor oversize requirements will be applied to the Douglas fir industry.

Wood Waste Destructors

J. B. SEAGE CO. INC.

10127 Adella Avenue, South Gate, California

Phone LOrain 7-1431

WESTERN DISTRIBUTORS AND MANUFACTURERS OF AMERICAN INCINERATORS

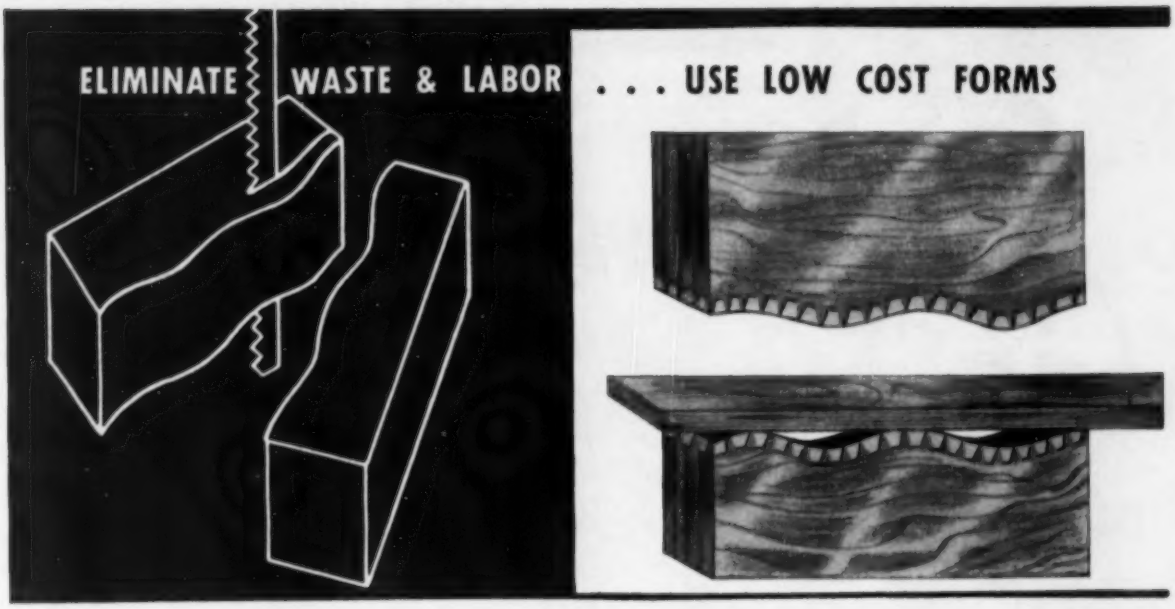
ALL UNITS FULLY APPROVED BY LOCAL AIR POLLUTION CONTROL AUTHORITIES

— Write for free estimates —

BRANCH OFFICES:

24 California St. San Francisco, Calif.

84 Madison St. Seattle, Wash.



GET BETTER *Curved Furniture Panels* FASTER

with a **LODGE & SHIPLEY** *Columbia*

HIGH-FREQUENCY PRESS

For low cost production of better curved panels . . . chair seats and backs, case goods, cabinets, fronts . . . switch to a Columbia High-Frequency Press.

Operation is fast, simple: 1) insert glued pack and start curing cycle; 2) minutes later, remove finished panel. You get high production from a single set of low cost metal-faced laminated wood forms. Floor space formerly needed for curing storage can be used for profitable production.

With a Columbia High-Frequency Press, you get *double versatility*. The same press is quickly switched over to conventional cold press work. High-frequency equipment and shielding meets all FCC requirements.

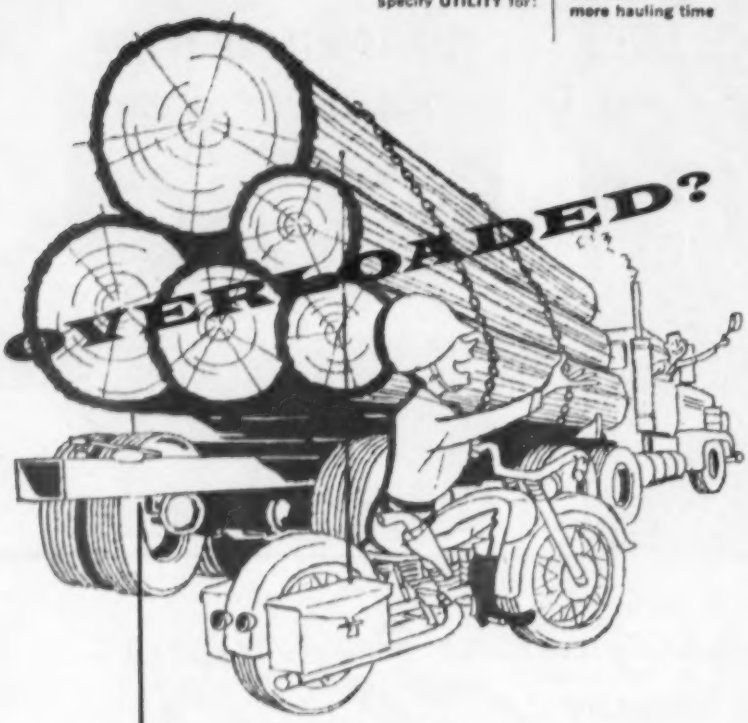
For complete details, write for Bulletin No. HF-12.

The Lodge & Shipley Co.,
3060 Colerain Ave., Cincinnati 25, Ohio

FOUR OUTSTANDING ADVANTAGES

- **Laminated part is stronger, more uniform, better looking**
- **Costly band-sawing, complicated sanding and finishing eliminated**
- **Fast setting by High-Frequency heat makes extra forms unnecessary**
- **Low form cost makes small lot production practical for the first time**

specify UTILITY for: | less down time more hauling time



not a chance with...

UTILITY

UTILITY LOGGING TRAILERS CARRY MORE BECAUSE THEY WEIGH LESS!

For maximum legal loads on the highway, specify UTILITY'S rugged logging trailers to get these plusses:

1. Built-in hydraulic scale.
2. Positive axle alignment adjustment.
3. Low-mounted trunnion shaft.
4. Famous Utility 10-inch brake.
5. Extra capacity air tank.

Representatives in all principal Western cities.

UTILITY TRAILER

UTILITY TRAILER MFG. CO.

Los Angeles 54, Calif.

Wood Preservative Use Rises in 1956

• Volume of wood treated with preservatives increased 2.5 percent during 1956, according to a survey made by the Forest Service in cooperation with the American Wood Preservers' Association.

Some 254.6 million cubic feet of wood was treated during 1956 as compared with 248.4 million cubic feet in 1955. This is a preliminary report based on figures from 310 of the 345 known wood-treating plants in the country, and represents most of the output of the wood preservation industry. It does not include preservatives applied by the do-it-yourself'ers.

About 152.6 million gallons of creosote were used for wood preservation in 1956, a one percent increase over 1955. Pentachlorophenol use increased 25 percent to 13.1 million pounds to keep the lead among solid preservatives. Second and third most used solids are chromated zinc chloride and Wolman salts (tenalith)

The increased use in preservatives occurred in treatment of poles, piling. and switchties. Fewer crossties and fence posts were treated. The following chart shows products treated in 1955 (final report) and 1956 (preliminary report):

	1955 Final	1956 Preliminary
Crossties, number	26,688,236	26,092,044
Poles, number	5,485,047	5,835,176
Lumber & timber, board feet	473,198,544	482,382,892
Fence posts, number	23,765,647	18,239,891
Piling, linear feet	20,820,272	25,569,280
Switchties, board feet	87,080,204	96,749,124
Crossarms, number	4,897,693	5,313,655
Woodblocks, square yds.	1,581,138	1,018,266
Miscellaneous, cubic feet	3,761,227	3,500,405

Lumber Firms Plan California Plywood Plant

• A new plywood industry which will require a $2,000,000 plant and a payroll of 300 is expected to start at Oroville, Calif., within two months.

The new concern is the Oroply Corporation owned by six lumber concerns which have purchased the machinery from the Westwood plant of the Fruit Growers Supply Co.

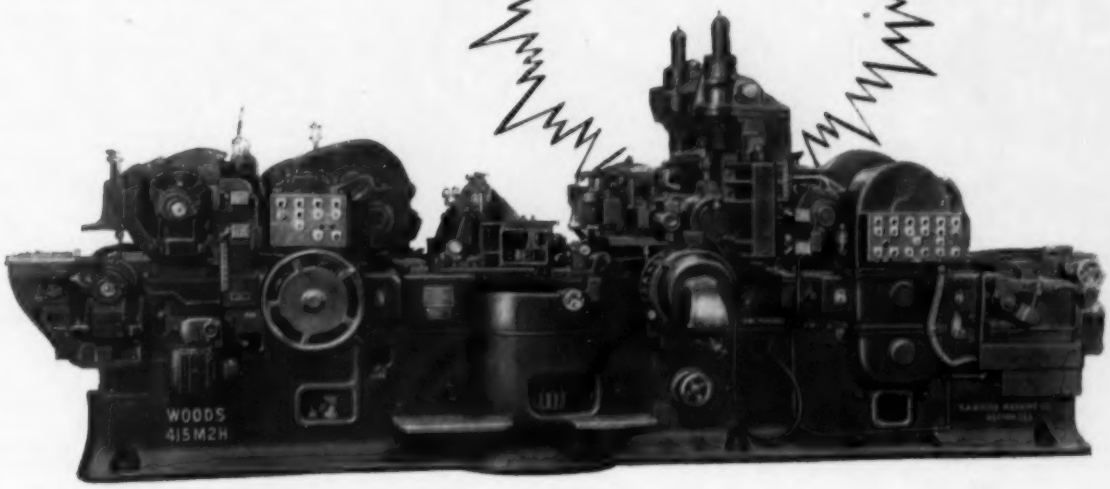
The joint venture is owned by Sacramento Box and Lumber Co., Woodleaf and Sacramento; Setzer Forest Products Co., Greenville and Sacramento; Meadow Valley Lumber Co. and Quincy Lumber Co., both of Quincy; Feather River Lumber Co of Sloat and Loyalton; High Sierra Pine Mills, Inc., Oroville, Calif.

Serving the Industry Since 1852

Another FIRST by WOODS

Woods Automatic Hydraulic Motorized Top Head Control

NEW!



THE Woods 415 M2H Motorized Planer and Matcher with a **New Method** for maintaining the precision milling of lumber stock to close tolerances. The New Hydraulic Motorized Top Head Control will hold the variation of thickness in lumber being planed to three thousandths of an inch. When the control switch is set for "Automatic Control", a deviation of three thousandths of an inch sets the Automatic Hydraulic Motorized unit into action to make the proper adjustment of top cutterhead and yoke to re-establish the original dimension. This new control can be furnished only with the Woods 415 M2H Motorized Planer and Matcher.

S. A. WOODS MACHINE CO.
27 DAMRELL STREET
BOSTON 27, MASS.

Plywood Imports for U. S. Show Increase

• Amounts of foreign plywoods imported into the U. S. are shown in the accompanying table.

Imports of plywood into the U. S. are not now subject to quotas or to other quantitative restrictions. They are subject to import duties which vary according to species, ranging from 15 per cent ad valorem on birch to 40 per cent on Spanish cedar. Imports presently consist almost wholly of hardwood plywood, probably less than two per cent of the total being softwood plywood.

Recent demands by the domestic hardwood plywood industry in the U. S. that current rates of duty be increased or that quotas be imposed on the imports are not in line with the international commitments of the U. S., in the General Agreement on Tariffs and Trade, according to the U. S. Tariff Commission. The Commission states an "escape clause" may be invoked, if it can be proved that the imports are in such quantity that they cause or threaten serious injury to the domestic industry producing like or directly competitive products.

The Tariff Commission last completed an escape clause investigation in June 1955, with respect to imported hardboard plywood. The findings did not support the claims of the domestic industry that imports threatened the U. S. industry.

Current demands by Congressmen for imposing restrictions on imports would have to follow the same procedure, if quotas are to be established or the concessions with respect to plywood are to be withdrawn or modified.

Plywood: United States imports for consumption by specified sources, 1955 and 1956

Country	1955 /1	1956
	QUANTITY (Square Feet)	
Japan	428,625,825	526,928,146
Canada 2/	99,338,280	81,244,276
Finland	40,560,133	33,876,284
Surinam	3,919,137	3,834,486
France	4,462,242	1,573,700
Italy	4,847,478	3,068,217
Mexico	2,618,275	436,443
All other 3/	42,396,061	55,302,834
Total	627,767,431	706,264,386
	FOREIGN VALUE	
Japan	$27,562,501	$33,909,185
Canada 2/	12,702,938	10,466,661
Finland	4,407,503	4,033,762
Surinam	423,236	396,949
France	334,493	205,471
Italy	255,188	165,953
Mexico	359,241	58,279
All other 3/	4,368,345	5,345,742
Total	$50,413,445	$54,582,002

1/ Preliminary. Individual importations for immediate consumption that do not amount to more than $250 under a statistical classification are not included in the data in this table.
2/ Includes Newfoundland and Labrador.
3/ Includes 9,784,038 square feet, valued at $1,025,061 free from Philippine Republic in 1955 and 14,904,978 square feet, valued at $1,221,994 in 1956 dutiable at preferential rates.
Source: Compiled from official statistics of the U. S. Department of Commerce.
U. S. Tariff Commission
March 1957

No Job's too Tough for Our CAMBIO Fully Automatic Barker

Shown here is our revolutionary Cambio Barker at the A. DeWeese Lumber Company, Philadelphia, Miss. Crooked and knotted logs like these present no problem to a Cambio Barker. It's built to bark any kind of logs—soft or hardwood—down to 4 feet in length at speeds up to 150 feet a minute. Built in the U.S.A., the Cambio is engineered to give you fast, efficient, low-cost barking.

Soderhamn Well-Known Slab Chipper and Chip Screen at Mississippi Mill Convert Waste to Profits

Two models — CS-90C or CS-35. New horizontal rotating types with double sawdust elimination; separate outlets for chips, sawdust and splinters.

Many mills are finding our chippers and chip screen big profit makers.

Call on us for anything you need in wood waste utilization equipment. Our complete line includes Cambio and Soderhamn D-3 barkers, slab chippers, chip screens, 26" Dixie gang saws, "Metal-Matic" metal detectors and many other types of woodworking machinery. Direct factory service and engineering at our Talladega plant Write for complete information.

SODERHAMN MACHINE MANUFACTURING CO.
SODERHAMN, SWEDEN SINCE 1864 TALLADEGA, ALABAMA

West Coast Sales Office: Room 409 Pittock Building, Portland, Oregon
Canadian Representatives: East Coast—Ferano Limited, Montreal, Canada

Canadian Western Appointments

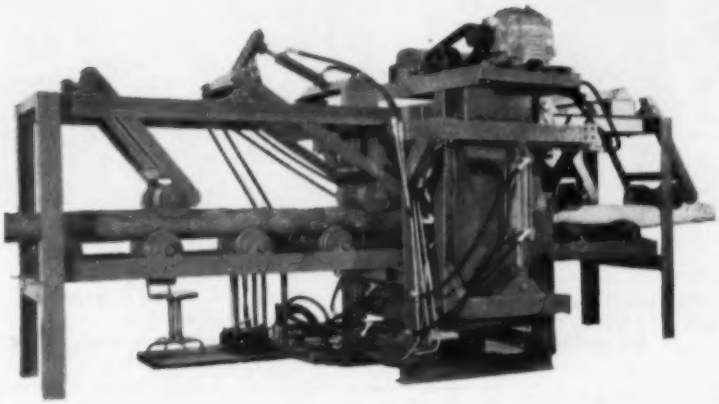
A re-alignment of senior management at the Canadian Western Lumber Division of Crown Zellerbach Canada, Ltd., effective June 1, was announced at Vancouver head office. As general manager of this division, D. R. Schmidt, formerly secretary, Crown Zellerbach Corp., San Francisco, assumes overall management responsibilities, reporting to President P. T. Sinclair, Crown Zellerbach Canada.

A. C. Ewart, of New Westminster, formerly manager of production, has been made resident manager in charge of operations at Fraser Mills where the company operates one of the largest sawmills and plywood plants in the Pacific Northwest. Prior to his retirement as president of Canadian Western in September, F. A. Drumb, long associated with the Crown Zellerbach organization in Portland, Ocean Falls and other centers, moves to the Vancouver headquarters of Crown Zellerbach Co. for assignments on special projects under Mr. Sinclair.

• Nearly two-thirds of Oregon's plywood and veneer industry jobs are in Linn, Douglas, Coos and Lane counties.

NOW! A LOG SKINNER THAT FITS THE POCKETBOOK OF *ANY* SAWMILL!

→ *Look at these Features!*



- Debarks any logs from 4" to 30" diameter, and from 8' length to tree length.
- Removes *all* bark, regardless of knots or deformities.
- Welded-steel, rotating air reservoir with constant pressure actuates skinning tools.
- Air pressure is never exhausted; only a small amount of air replenished daily.
- Predetermined, constant tool pressures are maintained.
- Four self-operating, askew angle skinning arms automatically open for any size log when fed end to end or otherwise.
- Cost and upkeep of debarking tools are a fraction of 1 percent of other mechanical debarking methods.

- Powered top and bottom rolls on infeed and outfeed. Hydraulic pressure hold-down rolls.
- Bearings sealed for life—no costly maintenance required.
- Infeed and outfeed controlled separately, allowing for independent forward, reverse, or synchronized movement of logs.
- 40 H.P., 3 Phase, 220/440 V., 1765 R.P.M. motor powers debarking ring.
- Other models for logs up to 60" diameter available.

✓ **Designed by a Lumberman!**

✓ **Built by a Lumberman!**

TESTED by a Lumberman for one year in actual continuous daily production with completely satisfactory operating results!
BY-PRODUCT SALVAGE WILL SOON PAY FOR IT!

"THE MULLIS LOG SKINNER" is the Debarker every lumberman has been waiting for! *Now* you don't need to invest a large amount of your working capital — you can save wear on saws — get bark for cork and wax by-products — clean chips for paper pulp—simple design—extremely low cost operation and maintenance.

WRITE

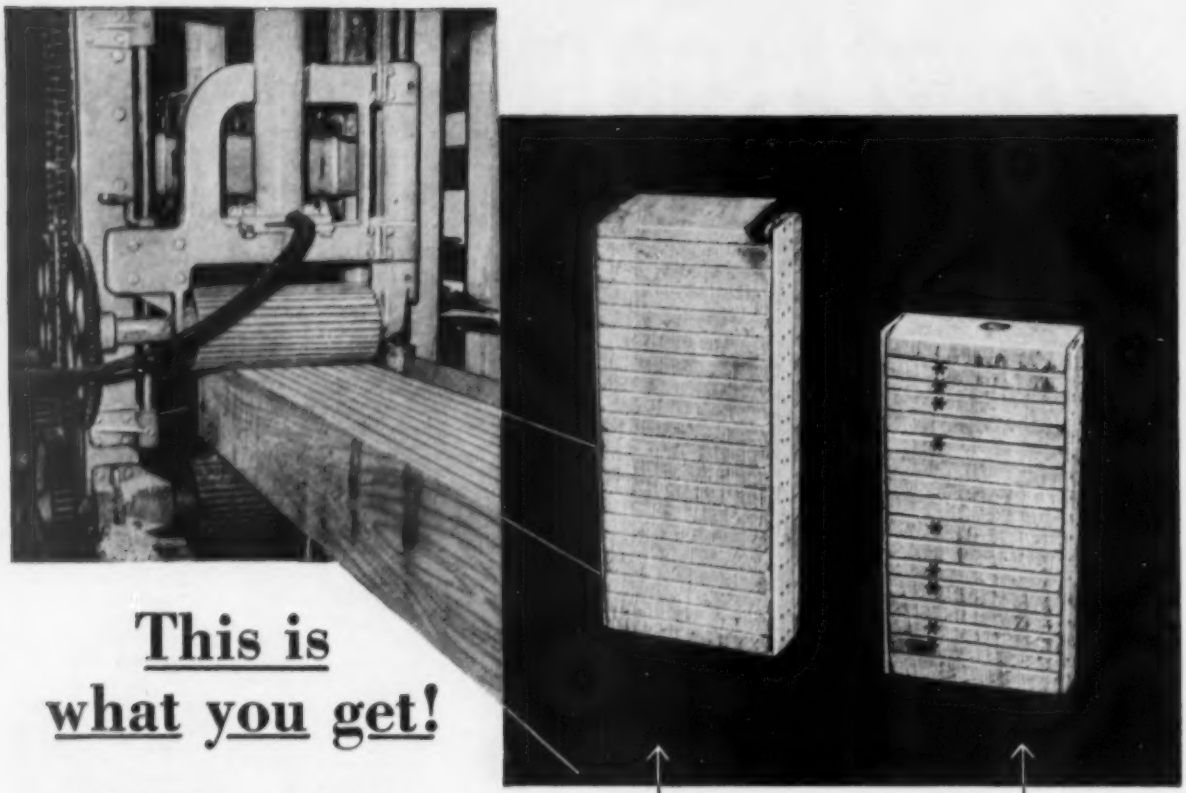
or Phone L-M Equipment Co.
TODAY for further details and price.
"THE MULLIS LOG SKINNER" is a practical, profit-boosting machine, applicable to your operation and pocketbook!

L-M EQUIPMENT COMPANY
THE HOUSE OF CHAIN SAWS

8705 S. E. 13th Ave., P. O. Box 4681
Portland 2, Oregon
Phone: BE 5-3146

Western Headquarters
for
CARL W. MULLIS
ENGINEERING & MANUFACTURING CO., INC.
LANCASTER, S. C.

SERVICE • INSTALLATION



This is what you get!

Photographs at right show actual test results of a DOMINION PREMIER GANGSAW as compared with a circular saw.

GANGSAW

87.91% — 1" full size lumber
12.09% — sawdust
No scants

CIRCULAR SAW

35.33% — 1" full size lumber
29.67% — sawdust
*35.00% — 1" scant size lumber

FEATURES

- Greater production because of built in oscillating feature
- Simple design — no complicated adjustments
- Made in Canada to withstand North American conditions
- Immediate service and parts—maximum overnight
- Multiple saws cut up to 1¼" per stroke
- All steel construction — no cast iron
- Every machine factory tested and shipped assembled in one piece
- U.S. Standard dimensions throughout

PLEASE WRITE FOR CATALOGUE NO. AY-200

DOMINION PREMIER GANGSAWS

Built by

DOMINION BRIDGE COMPANY LIMITED

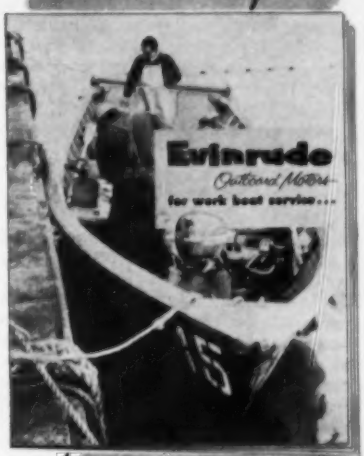
P.O. Box 160 VANCOUVER Phone Glenburn 1000

Represented in Oregon, Northern California and Nevada by FRED E. BARNETT COMPANY
(Offices: Portland, Klamath Falls, Eureka, North Sacramento, San Francisco, Ukiah, Calif.)

Represented in Idaho and Montana by FOREST PRODUCTS CO., Kalispell, Montana.
Represented in Washington by MILL EQUIPMENT INC., Seattle, Wash.

Represented in Oregon by PORTLAND CHAIN MANUFACTURING CO., 4000 Northwest Yeon, Portland, Oregon

new book



☆ gives you the facts on

modern

OUTBOARD POWER

for *lumbering* service

TODAY there's a *new kind* of outboard power for work boat duty! A complete line of new Evinrude *Aquasonic* models so advanced in capability, stamina, and smooth, quiet operation that they set entirely new standards of performance. Get the facts! Send coupon for booklet.

EVINRUDE MOTORS
Division of Outboard, Marine & Mfg. Co.
4631 N. 27th Street, Milwaukee 16, Wisconsin

Send me booklet on outboard power for work boat duty.

Name.....

Address.....

City.....Zone...State.....

(In Canada: Mfd. by Evinrude Motors of Canada, Peterborough)

Research Center

(*Continued from page* 58)

activities, are 56 by 192 and 56 by 272 feet. The office wing is 40 by 152 feet with a reception area 24 by 72 feet in area.

The office wing is framed by 40-foot trussed bents, and glulam beams support the second story of the office wing. All glulam beams, legs and members were fabricated in the local manufacturing and engineering headquarters of Timber Structures, Inc., Portland, Ore.

The lower floor is 32 feet wide, but more space was needed in the second level, so the architect solved it by projecting the second floor out over the first.

Exterior of the building will be finished in 2 by 6 inch western red cedar tongue-and-groove installed vertically between the protruding legs which support the main roof beams. Cedar siding will be rough sawn and stained.

The rigid frame design features a patented haunch connection—a steel strap binding beam to legs. This is just one of the many possible variations in design and use of glulam beams and arches made by Timber Structures, Inc. of high grade Douglas fir structural lumber. Some buildings, for which Timber Structures has supplied glulam structures, are so large they span 300 feet without a supporting post, such as the Montana State University health and education auditorium at Bozeman.

A Sawyer's Responsibility

(*Continued from page* 48)

WE STILL HAVE STEAM at the log end of mill on kickers, loaders and nigger.

We get steam from our main power plant in which they have high pressure boilers. The steam is reduced to 140 pounds to the mill. This gives us very regular steam all the time, which I like very much. You can do better work with a nigger. I think top tooth in nigger bar is important as to its shape and length so that it will not damage the lumber or timber. I seldom ever damage it enough that it will not press out at the planer mill.

We have a good thing in our log deck, which can be operated by sawyer or scaler. It is called a shaker, does away with a man on deck and is much better. You can keep logs down to the loader much straighter. This can be made by any sawmill shop out of railroad iron or scraps of iron. You have to have a cylinder and shaft. We bought a second hand cylinder. We had the shaft. The cost was small considering what it is worth to the mill.

THERE'S NO SUBSTITUTE for LUBER-FINER'S ENGINEERED PROTECTION

YES! IT'S WHAT'S **INSIDE** THAT COUNTS
The Efficiency of Luber-finer's Exclusive Patented Process
HAS NEVER BEEN EQUALLED!

USE ONLY GENUINE Luber-finer DIESELPAKS

Only a Luber-finer Unit *Plus* a Genuine Luber-finer Pack can give the Exclusive Patented Filtering Process that has made Luber-finer The Standard of The Industry Since 1936!!

THERE'S A LUBER-FINER MODEL FOR EVERY TYPE OF ENGINE— EVERY TYPE OF OIL!!

LUBER-FINER PACKS AVAILABLE

1. REFINING PACK
Introduced to the public in 1935 for use with straight mineral oils, fuel oils, hydraulic oils, and inhibited industrial oils.

2. DIESELPAK
First made available in 1941, the DIESELPAK was primarily designed for use with H.D. detergent compounded oils and has also achieved outstanding results when used with fuel oils and straight mineral oils.

DON'T BE MISLED BY PRICE ALONE!
There is no substitute for DIESELPAK'S Patented Filtering Process for H.D. Compounded oils AT ANY PRICE!
The DIESELPAK cleans more oil faster —keeps it CLEAN longer—and gives more service and better engineered protection than ANY of the substitute filtering elements being offered for Luber-finer units.
IT PAYS TO GET THE BEST!

STANDARD OF THE INDUSTRY SINCE 1936
Luber-finer Units are Standard and Optional Equipment on America's Leading Diesel Trucks, Tractors, Stationary Engines.
Write for Complete Information to Dept. **303**

LUBER-FINER, INC.
2514 S. Grand Ave., Los Angeles 7

Dry Kiln Operators Meet

(*Continued from page* 56)

Nearly all of the loss from these two factors appeared in the 10- and 12-inch widths.

Better sorting of lumber is necessary in order to do a proper job of seasoning. Species must be separated, heart must be separated from sap, lumber from down timber must be dried on different schedules than that from live timber. Wood having a great variation in weight such as found in larch dries much better when separated into heavy and light groups. Segregation is the answer to many seasoning problems.

Schedules for Western Softwoods

(U. S. Forest Products Laboratory, Madison, Wis.)

Based on a study made of western mills, tables were presented showing:

- Differences in regional schedules, 8/4 Douglas fir, lower and upper grades.
- Similarity of regional schedules, 4/4 ponderosa pine, upper grades.
- Variation between mills within the Central California region, 4/4 ponderosa pine, upper grades.

Air Drying Lumber with Forced Air

(Oregon Forest Products Laboratory, Corvallis, Ore.)

This method is not new, but improvements in fan design and lumber handling, increase in freight rates and higher moisture content of lumber now sawed has revived interest. A test installation was made at Santiam Lumber Co., Lebanon, Ore. Cost was $2300. Operating costs were $2.39 per M fbm.

On the first change, about 75,000 board feet of 2-in. West Coast hemlock dimension lumber in 6-, 8-, and 10-inch widths, were stacked in two piles. A framework of planks and plywood covered the central alleyway between fans.

Two 5-foot, 2-blade, propeller fans with 7½-horsepower motors were placed on skids between piles to draw air through about 25 feet of lumber on each side. Fans were rated at 40,000 cubic feet of air per minute at half-inch pressure, and 53,000 with free air flow.

On the second charge, about 105,000 board feet of 2-inch Douglas fir dimension lumber in 6- and 8-inch widths were stacked.

Fans were spaced about 65 feet apart, and lumber was piled two tiers wide along an alleyway between the fans. The central alleyway was covered with planks and plywood, and the lumber tiers were roofed with aluminum-covered frames and plastic sheeting to divert rain.

Air velocities were measured along inside and outside of piles when fans were blowing into the central alleyway, and again when fans were blowing out. Drying was done with fans blowing out.

- Lumber in the first charge was stacked for 11 weeks, beginning in November 1956, but the fans were operated during only 8 weeks.

At the end of drying, moisture content had been reduced from 66 per cent to a final average of 29 per cent.

- Lumber in charge two was reduced from 47 per cent moisture content to a final calculated average of 25 per cent in 14 days. Running the fans another week resulted in average reduction to 23 per cent moisture content.
- Stacking for charge two gave faster, more uniform drying than that from stacking for charge one. Stacking for charge one may, however, be desirable during hot, dry weather.
- Pulling, rather than pushing, air through the piles allowed increased lumber volume per charge and increased uniformity of air flow.
- Since the static pressure in charges one and two was considerably less than that designed for, it should be possible to reduce the initial cost of equipment by reducing the motor size or substituting a disc-type fan.
- Based on two charges, it appears some advantage can be gained by forced air drying, since many mills report penalties for overweights up to $4 and $7 per M fbm for Douglas fir and West Coast hemlock during part of the year.
- Based on air velocities with 105,000 fbm, it is believed the volume per charge can be increased to at least 150,000 fbm with the same equipment.
- With a humidity control switch on the fan motors, power costs have been reduced without loss in efficiency.

Wind Tunnel Kiln Drying

(Gram Development Co., Portland, Ore.)

This type of dryer consists of a long, inexpensively constructed tunnel with one or more fans at one end to draw outdoor air through heaters and force the heated air lengthwise of the tunnel, through cross-stacked loads of lumber. Heated air is discharged into the open atmosphere at the opposite end. Drying temperatures are low—generally between 100° and 125° F.

The BLO - R - DRY installation is eminently suitable for the drying of common boards and common dimension. This type of dryer has considerable possibility in the drying of siding, flooring strips, one-inch finish and those items of industrial stock which do not need to be dried below 16% to 20% moisture content. Main performance limitation is drying of items two inches and over in thickness to very low moisture content; in such cases, drying time is so much increased that this type of drying in all likelihood becomes impracticable.

Temperatures used are not high enough to set the pitch in clear items. This type of drying is not recommended for such items as cross-arms or thick stock as a considerable variation between shell and core is liable to occur.

Species most successfully dried so far include Douglas fir, western hemlock, and white fir. As yet, no tests have been made on drying pine. There is the possibility of risk of blue stain in drying this species.

The travel time for 2″ common Fir from the green end to the dry end is approximately seven days. A dry load is pulled out and a green load is shoved in, moving the loads in front forward. Holding tunnel for the normal installation is 112 feet long which accommodates 14 loads built on 8 foot kiln cars. Each kiln car consists of 6 fork lift packages

control stain and mold in Lumber and Logs with

Santobrite® S

Oliver

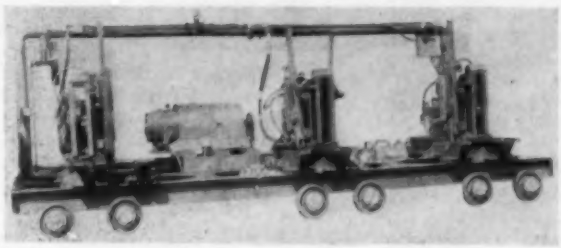
®T.M. Reg. U.S. Pat. Off. by Monsanto Chemical Company

WRITE FOR ADDITIONAL INFORMATION TO THE DISTRIBUTOR

R. T. Vanderbilt Co., INC.

230 PARK AVENUE • NEW YORK 17, NEW YORK

SALEM AUTOMATIC CARRIAGE ... with Salem Electronic Set Works



A recent installation at General Box Distributors, Fresno, California, included a 3-head block, 66" opening, Salem Automatic Carriage with air tapers, heavy duty receding tong dogs, 3-arm carriage flippers, heavy-duty oscillating hammer dog, and bark air blower assembly. They also are using Model 820 Salem Motor Drive Feed Works, driven with a 100 hp, 1200 rpm motor.

Salem Equipment & Supply Co.
Earl R. Hitchman, Pres.
3455 D Street • Salem, Oregon
PHONE EMpire 4-4727

built 2 wide and 3 high. If stock averages 20 feet long there will be approximately 12,500 feet on a kiln car of 6 packages. Two of these kiln cars can be pulled each day, or a capacity in this case of producing 25 M per day or 175 M per week.

The uniformity of moisture content in this type of drying is very good. In a recent test there were the usual heart pieces on the low side and a few sinkers on the high sides, but better than 80% fell in a range of 12 to 16% MC.

Steam Pressure Controllers
(Moore Dry Kiln Co., Portland, Ore.)

Pressure controllers are volume controllers and can control temperatures.

A pressure controller can help by:

- Simplifying the work.
- Permitting continuous steam flow to the kilns and more uniform heat distribution throughout kiln length.
- Reducing maintenance by eliminating wire drawing or wearing of valves and seats of hand valves.
- Reducing maintenance by having continual steam pressure on traps.
- Saving some steam.

Contracts in Custom Kiln Drying
(Lumber Manufacturers, Inc., Portland, Ore.)

Every order for custom kiln drying is an effect or is developed into a contract, with four basic requirements: WHO - WHAT - WHEN - AND CONSIDERATION, or "for how much money."

The WHAT means WHAT work is to be done on WHAT lumber. There should be thorough understanding as to the lumber that is coming in; relative to species, thickness, width, length and quantity.

WHAT kind of a kiln drying job is to be done. WHAT is to be the final moisture content? Is that moisture content to be the average moisture content or top moisture content or is there to be a minimum and maximum moisture content specified? Is the lumber to be equalized and conditioned? Is moisture content to be determined by moisture meter tests with short needles or with long needles to give a core test reading or is the moisture content to be determined by the average of the pieces by weight?

WHAT other work is to be done such as resawing and surfacing, trimming to length, trimming for grade or to raise grade and if so to WHAT extent? It should also be understood clearly as to when the stock is to be shipped out and by WHAT means: railroad car, truck and type of loading.

There should be a complete understanding as to just when the lumber is to come into the custom plant and WHEN it is to be shipped out. A clear-cut understanding as to the length of time between arrival of lumber and shipment will avoid much trouble.

It is the custom kiln operator's responsibility to handle a shipment of lumber as a reasonable and prudent man would handle it. That means that the custom kiln operator must use a kiln schedule suitable for the lumber being dried.

The Burden of Proof is on the Custom Dry Kiln Operator. The Custom Dry Kiln Operator's own opinion is not enough. He must have supporting evidence.

Woods Dried in Southern California
(Southern California Seasoning Assoc.)

A display of hardwoods and softwoods, both imported and domestic, dried in southern California, was arranged through the courtesy of Tropical and Western Lumber Co., Los Angeles, Calif.

Small Board Mill Planned

- West Virginia Pulp and Paper Co. will construct a small plant at Tyrone, Pa., for the manufacture of wood particle board used in the furniture, woodworking and building industries.

Design of the new plant now is being engineered and construction is expected to begin in early summer. Initial projections indicate that the plant will begin producing board in about a year.

If the operation of the unit indicates the potentiality of profitable operation from a larger and more commercial unit, the company will give serious consideration to further investment of this nature.

Rader Solves CONVEYOR PROBLEMS

RADER
PNEUMATIC CONVEYORS

PIPELINE GOES OVER YARD, UNDER POND AND ROAD TO RAIL CARS OR ANY DESTINATION, CARRYING CHIPS, BARK, SAWDUST OR SHAVINGS.

Vancouver, B.C. 4645 Main St. | Eureka, Calif. Box 61 | Boston, Mass. No. 10 High St. | Memphis, Tenn. Box 3722 Mun. Airport

Rader Pneumatics, Inc. 1739 N. E. 42nd Street Portland 13, Oregon ATlantic 2-7767

Two Gangsaws Help Recovery

(*Continued from page* 48)

without realizing that the gain in material and grade by using the two gang method would give a far greater return.

A GAIN IN OVER-RUN of 10% in a gang mill equipped with a 36″ log gang and a 36″ cant gang sawing Douglas fir dimension lumber from logs averaging 16″ in diameter and 24 feet long will mean a saving of 10,000 board feet per day. If properly arranged and equipped, the cant gang requires only one man to operate.

On a recent visit to Sweden, I saw a number of gang mills in operation. Compared with gang logs have available here, logs were very small but even small logs like six inch are cut on the two-gang system.

Utilization was so close that there were not enough leftovers to produce steam for drying without using highly efficient boilers with pre-heaters and automatic feed arrangement for the residue fuel. The logs, of course, were barked and slabs and edgings used for pulp chips. Hundreds of mill operators in Europe cannot all be wrong using the same system. With available saw logs getting smaller, gang mills here should take the first step forward and build mills along the two gang system.

One objection to the two-gang system is desireability of sorting logs for size. This was true when using the old machines. With new machines, sorting of logs is not of much importance because with the automatic overhang of the saws, perfectly adjusted to the rate of feed, large logs or small logs are cut at maximum efficiency. Sorting of two or three sizes will be sufficient when cutting logs as big as 30″ and down in size.

STUD MILLS AND MILLS operating low grade small pine and spruce timber, should consider saving in materials that can be effected by using the two gang system, where a permanent operation is feasible. The accompanying chart shows an arrangement of a two gang sawmill with only eight men on the sawmill floor—two men on the log gang, one man on the cant gang, two men on the edger and two men on the automatic trimmer.

In case two cants are produced in the log gang, cants can be piled on top of each other for the cant gang with a simple mechanical arrangement on the transfer chain for the cants between the two gangs. Cants and board and dimensions are separated by an adjustable overhead stop that will catch the cant but let the boards and dimensions go underneath. Behind the cant gang the full edged boards in the middle are separated from outside boards and dimensions that have to go to the edger by two wide steel strips connected to the log guide blades and using left and right hand threaded screw rolls on the suspended rollercase.

Thus boards from both gangs that need to go to the edger and also slabs, are dumped on the transfer to the edger. Slabs are separated from boards by two men at the edger, who push the slabs through a hole along the edger rolls. The hole is covered by overhang brackets so boards and dimensions fall right on the rolls in front of the edger.

The edger has three saws, of which two are moveable and one stationary. Behind the stationary saw is a steel metal strip that separates this edging from the board. A similar strip is behind the moveable saws; the front end of the strip moves with the saws and can be shifted from one saw to the other, separating the edgings. Left and right hand screw rolls in the roller case behind the edger dump the edgings in the slab conveyor underneath.

Any re-edging to be done can be picked up from the transfer to the trimmer and sent back to the transfer to the edger. In a sawmill where the refuse is used for pulp chips, a separate conveyor system for the pulp wood is provided and a separate conveyor system for the sawdust, as indicated on the chart.

The Marvelous Montgomery

BLO-HOG

Patents Pending

(The only all-purpose hog in the world)

Eats Up Everything!

C.I.T. Terms Available

. . . including Pine, Oak, Gum, Hickory, Elm, Cedar, Wet Veneer and Sandy Bark. Conveyor-fed — no attendant required. Positively protected from major damage by tramp steel. All connections locked — nothing to shake loose. Maintenance costs unbelievably low.

". . . Dear Mr. Montgomery: It is an unbelievable machine and it is still hard to believe that it is actually handling the enormous volume of scrap we are feeding into it. We operate the hog without an attendant — which means a considerable saving." — J. B. BLACK, Ocala Mfg. Co., Ocala, Fla.

Somcor Iron Works, Everett, Washington, W. Coast Rep. Canadian Somcor Iron Works, Ltd., Vancouver, B. C., Canadian Rep.

Write for bulletin and details

JACKSONVILLE BLOW PIPE CO.

P. O. BOX 3687 - JACKSONVILLE, FLORIDA

Faster, better service made possible by the convenient location of an Indair dealer near your business. Dial Indair for your welding and cutting needs.

INDUSTRIAL AIR PRODUCTS CO.

PORTLAND • SPOKANE • SEATTLE • YAKIMA • MEDFORD • KENNEWICK

Supervisor's Self-Analysis

(*Continued from page 35*)

• Encourage your subordinates to produce more efficiently?

How to Determine Performance Requirements

Do You . . .

• Decide what is expected from each employe?
• Make a final determination of work requirements based on company needs?
• Evaluate objectively each employe's performance based on company requirements?

Develop Your Workers

Do You . . .

• Select the right person for the right job?
• Help employes make adjustments on new jobs?
• Decide training needs of your coworkers?
• Suggest employe-training to management?
• Discuss career opportunities with employes?
• Have an understudy?

Maintaining a Cooperative Workforce

Do You . . .

• See that employes are rewarded for jobs well done?
• Commend the entire group on performance when deserved?
• Transfer and reassign employes for the best use of their abilities?
• Have the confidence and loyalty of the employes?
• Maintain effective discipline.
• Keep employes informed on company policies?

Your Self-Improvement

Do You . . .

• Recognize your own short-comings?
• Constantly strive to get along with people.
• Have a cooperative attitude toward your job and your boss.
• Seek or avoid responsibility?
• Keep abreast of new developments in the forest products industries?
• Like to supervise?
• Need additional supervisory training?

This self-analysis chart lists in systematic order the responsibilities a supervisor needs and is as an aid to every supervisor who wants to improve himself. The manner in which you perform each of these duties and responsibilities determines your success or failure in carrying out your job to management as a supervisor. It is toward this general objective that every supervisor in the forest products industries should strive.

You should apply yourself constantly toward improving your supervisory performance. You are the one person who can do something to improve yourself as a good supervisor. This chart has been devised to help you identify those duties on which you need to concentrate the most as a supervisor. If you are successful in reaching these objectives, not only you, but your employer will benefit.

Finally, these tests are meant merely as a guidepost to help you become a better supervisor. You can evaluate yourself by answering these questions. If, however, you answer "yes" to 50 percent of these questions, you are managing your resources to get results, working together with others, for more management power. Check yourself carefully.

Booklets Issued

• Two new booklets have been issued by the National Safety Council, Chicago, Ill.

"Hand Soldering and Brazing" presents up to date information for use in both industry and home.

"Your 10 Best Tools" warns workers against hand injuries and tells how to protect hands.

62" Heavy Duty Band Mill

• Rugged... Massive
• Double-Column Type
• Slab and Saw Logs Up to 50" Diameter

Costs No More Than Ordinary 54" Band Mills

Big Capacity...

McDonough 62" Heavy Duty Band Mill

...gives you maximum production at lowest cost

Ultra sensitive knife edge saw strain on 10", 16 gauge saw is controlled by convenient hand wheel on sawyer's side. Large diameter wheel shafts and Timken wheel bearings insure high speed, trouble free production.

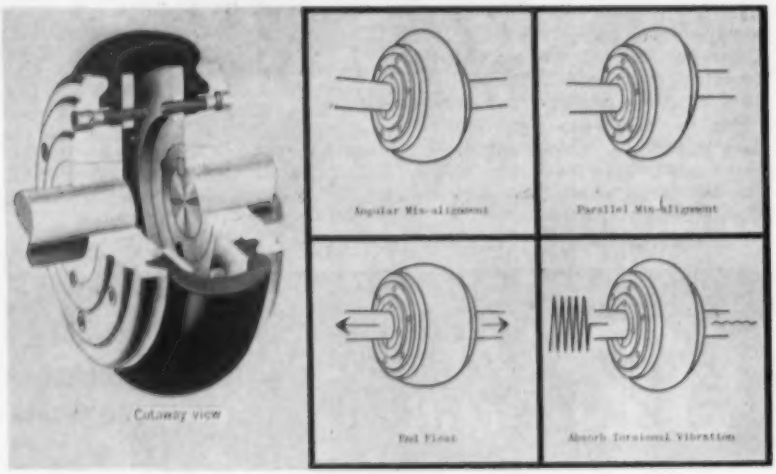
It's easy to convert to a McDonough Band Mill using the circular saw husk for the carriage drive. Simple conversion plans are available.

Ask your McDonough Dealer or write direct TODAY.

Genuine McDonough Drop Forged Steel Dogs and Non-Defacing Carriage Dogs

McDONOUGH MANUFACTURING CO.
1502 GALLOWAY
EAU CLAIRE, WISCONSIN

EXPORT DIVISION
50 Church Street
New York, New York
Represented in Canada by Preston Woodworking Machinery Co. Ltd. Preston, Ontario, Can



Tire Is Heart of New Coupling

A NEW CONCEPTION in flexible couplings is announced by Dodge Mfg. Co. As shown here, the heart of the "Para-flex" coupling is a tire with synthetic tension members bonded together in rubber.

Ability to handle angular mis-alignment, parallel mis-alignment and end-float, and in any combination, is one of advantages claimed. The flexible member also cushions shock loads and diminishes torsional vibration, thus protecting both the driver and the driven machine.

This new coupling has been made possible by the technological advance in the manufacture of tires, now engineered to carry tremendous loads at high speeds and stand terrific shocks.

BOTH HUBS of the coupling are machined to take Dodge Taper-Lock bushings. These give the equivalent of a shrunk-on fit on the shaft and permit quick and easy application to shafts of different diameters without reboring.

The tire has a transverse split molded into it, which permits easy installation and makes replacement possible without moving driver or driven machine. To make a change it is only necessary to loosen the cap screws enough to allow removal of the tire and to fit a new one in place.

According to Dodge engineers, Para-flex will take angular mis-alignment up to four degrees, parallel mis-alignment up to ⅛", and end-float up to 5/16"—contingent upon the size of the coupling and the duration of the conditions—or it will take all of these simultaneously.

Because there is no metal-to-metal contact, no lubrication is required. No maintenance or regular inspection for lubrication is needed. Safety is promoted by flush design—all cap screws are countersunk, metal surfaces are finished all over, there are no protruding parts. The coupling is designed to occupy a minimum of space on the shaft.

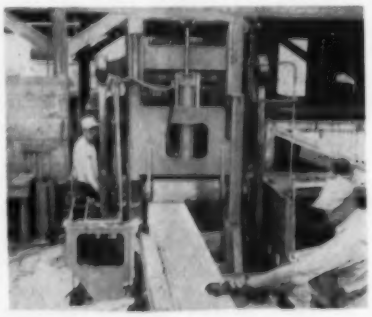
Para-flex was developed in West Germany.

New Right-angle Gear Motors Feature Aluminum

• Sterling Electric Motors announces a new line of right angle gear motors from ¼ through 5 hp in all enclosures. (See foot-mounted model above.)

Gear case and motor housings are of #319T6 alloy of aluminum. This heat treated aluminum casting absorbs the high torque characteristic of gear motors, has good heat transfer properties and is corrosion-resistant. The worm wheel is hobbed from high-grade gear bronze, while the worm itself is of high-carbon steel which has been heat-treated and polished.

High thrust and radial capacity is obtained through tapered bearings on the output shaft which assures alignment and avoids damaging pre-loading conditions. Ball bearing construction is used throughout the rest of the motor. Double-positive oil seals are used on both the input and output shafts to assure many years of leak-free operation.



SHOWN IN PHOTO is "Sweed" gang saw operating at McGrew Bros. sawmill, Medford, Ore., 28" size. In operation since last June, it averages 80M per shift. McGrew Bros. and E. C. Kaune are principals and operators. "Sweed" gangmill is manufactured and sold by National Machinery Sales Co., Gold Hill, Ore.

ENGINEERS · CONSULTANTS
MATER MODERN SAWMILL MACHINERY
MATER MACHINE WORKS
CORVALLIS · OREGON

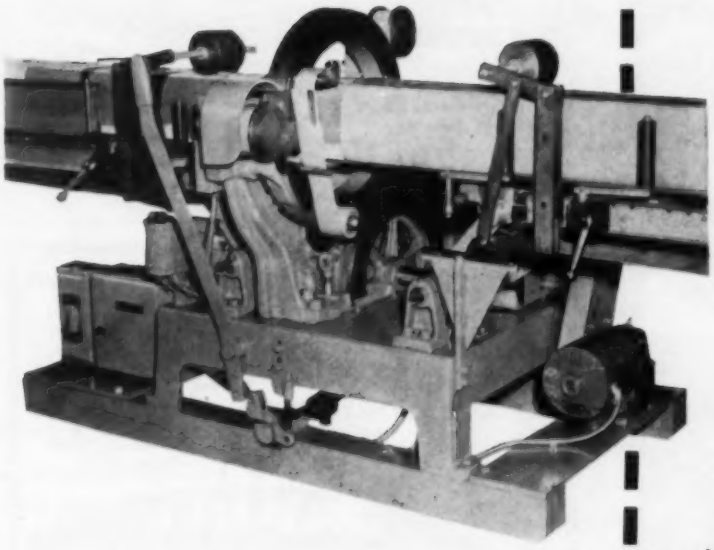
YOU CAN MECHANIZE YOUR MILL YOURSELF with MATER CONVERSION KITS!

Mater dogging conversion kits—convert your knees to non-defacing, fully oscillating air tong dog operation; Mater Flipper conversion kits; Mater Clutch Taper—automatic, fits on any carriage. Manufactured by the makers of famous Mater Riderless carriages, Mater automatic log decks, etc.

MATER MACHINE WORKS, INC. • Corvallis, Oregon • Phone Plaza 3-5912

PIERCE D3S-A LUMBER WRAPPER

gives you tight, protective, low-cost packaging



Solves shipping problems. Protects quality. Reduces damage. Ideal for flooring, moulding, dimension stock, slats, sash, trim, paneling and straight-length millwork.

Here's the answer to your packaging problems — the Pierce D3S-A Lumber Wrapper. And it can pay for itself through lower-cost packages, time and labor saved, and damage prevented.

- Automatically makes a tight, continuous spiral paper wrap—each layer firmly glued to preceding wrap.
- Saves time and labor—wraps up to 80 feet per minute.
- New 2-hp variable speed drive—permits adjusting speed to paper strength.
- Steel plate guides with rollers reduce twisting of short packages.
- Automatic cam-controlled hold-down rollers.
- Push-button machine adjustment control optional.

Write or wire for full details

PIERCE WRAPPING MACHINE CO.

1100 E. 31st St. LaGrange Park, Ill.

HANCHETT *knife grinders*

CHIPPER — BARKER — HOG KNIVES

for better, more uniform wood CHIPS

HUGE PROFITS FROM WASTE MATERIAL

at lowest cost

FULLY AUTOMATIC TABLE DRIVES HYDRAULIC OR ELECTRIC

SPEEDS: 10′ to 80′ per min. (faster if required)

CAPACITY: 32″ to 184″

OTHER MODELS:

DN — MEDIUM DUTY 32″ to 108″ capacity

AK — EXTRA HEAVY DUTY 84″ to 360″ capacity

HANCHETT MANUFACTURING COMPANY

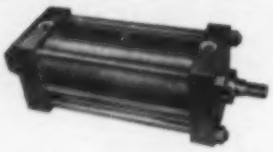
World's Largest Manufacturer of Knife Grinding and Saw Sharpening Machinery

MAIN OFFICE — Big Rapids, Michigan WEST COAST — Portland, Oregon

Modernair

HEAVY DUTY CYLINDERS

for Air or Hydraulic Service



Developed to meet the need for a rugged, reliable cylinder, for heavy mill-type service, MODERNAIR's new Heavy Duty Series are made in two types:

HA • for air service to 200 psi. **HH** • for hydraulic service to 1,000 psi.

Both types are available in 3¼", 4", 5", 6" bore sizes, optional stroke length.

Features include:

- ★ Rolled steel heads
- ★ Extra-heavy tie rods
- ★ Heat-treated, chrome plated piston rods
- ★ Self-adjusting "Unoepac" rod seals
- ★ Needle valve cushion adjustment

Write for catalog, prices today—or phone your local MODERNAIR distributor (listed on your phone book Yellow Pages).

Modernair CORPORATION

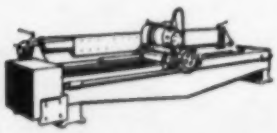
Dept. K6, 400 PREDA STREET, SAN LEANDRO, CALIF.

Member National Fluid Power Association 31

COE

VENEER MACHINERY

LATHES
CLIPPERS
DRYERS
KNIFE GRINDERS



The **COE MFG. Co.**

Painesville, Ohio

QUALITY RUGGEDNESS PERFORMANCE

you get them all in a **ZIDELL DRIVE**

ELECTRIC DRIVES FOR CARRIAGES · FEED ROLL SYSTEMS VENEER LATHES · TRAY SYSTEMS CONVEYORS · MACHINE TOOLS, ETC.

DISTRIBUTORS for:
CUTLER-HAMMER CONTROL EQUIPMENT
BROOK & DELCO ELECTRIC MOTORS

ZIDELL
MACHINERY & SUPPLY CO.
3121 S. W. Moody St., Portland, Ore.
CA 8-8691

LITERATURE ON REQUEST

We Manufacture All Types

MODERN SAWMILL MACHINERY

Overhead Trimmer

Designed especially for the Modern Sawmill Operator who wishes a machine to cut accurately with minimum cost and maintenance. Over 150 new machines installed in the past 10 years backs our claim that our machines are among the best.

PRINEVILLE MACHINE & SUPPLY COMPANY

PRINEVILLE, OREGON

Phone HI 7-6225 P. O. Box 85

GENERAL MACHINE and ENGINE WORKS

Gang Saws • Presses • Lumber Pilers
Hydraulic Rams • Crankshafts
Monitors • Tenoners • Special Machinery

JOHNSON MANUFACTURING CO.

Fox and Holly Sts. • Seattle 8, Washington

Write for 8-Page Folder

S. A. WOODS Machine Co.

Diagonal Planer and Matcher

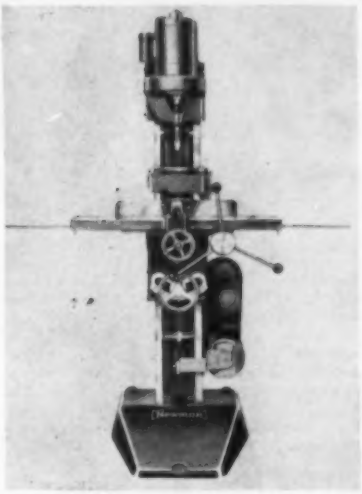
Choice of 6 to 16-knife machines

- Eliminates End Snipingl
- Smoother Surfaces Around Knots and Cross-Grain!
- Requires LESS Power on Feed!
- Reduces Side Friction, Feed Roll Wear!

Manufacturers of Planers and Matchers for 103 Years

1218 N. W. GLISAN • PORTLAND 9, OREGON

New Products & Services



Adjustment on Mortiser Easy

EITHER HARD OR SOFT wood can be mortised up to ½" with this new Newman Machine Co. Model T-20 mortiser. It is of the hollow-chisel type and designed for use in millwork shops. The table takes stock up to 20" high. Stock can be mortised to the center of 8" pieces and to a depth of 4⅛". It can be changed quickly to a single borer and will handle bits from ⅛ to ½". Motor is a built-in ½ hp 3600 rpm 115/230 volt motor equipped with lubricated-for-life bearings.

New Yale & Towne Lift Trucks Are V-8 Powered

• The Yale & Towne Mfg. Co. announces the development of an all new line of 15,000 to 20,000 lb. capacity gasoline powered, pneumatic tire lift trucks with major design advances.

Outstanding features in the new Yale G-3 line are the channel construction which provides 300% more operator visibility, better load stability and the fastest possible cyclic rate of operation within the limits of safety.

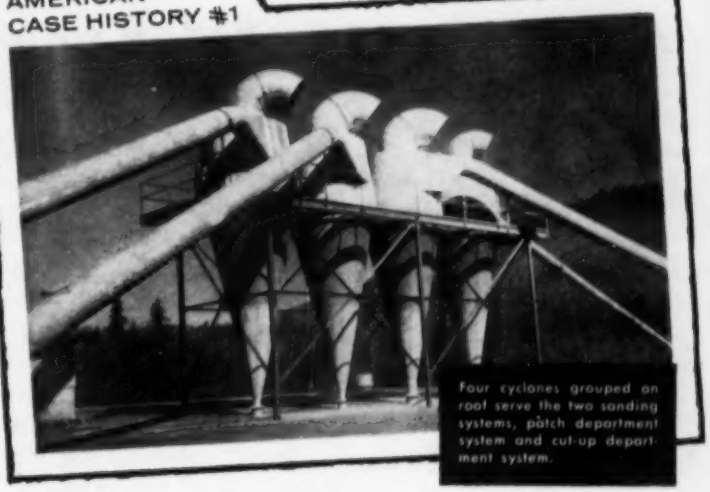
The line is being introduced in 15,000 - 16,500 - 18,000 and 20,000 pound capacity models powered with gasoline or LP-Gas and utilizing either a straight, friction clutch transmission or Fluid Coupling transmission.

The new Yale truck with fluid coupling transmission is powered by a Chrysler V-8 industrial engine which develops 105 hp at 2800 rpm. With a friction clutch transmission a Ford V-8 industrial engine of equal horsepower is used. Both drive units have four speeds forward and four reverse.

New Paper Is Tougher

• American Sisalkraft Corp. has three new grades of industrial packaging paper. They are, Fibreen 890, 920 and 950. Each is reenforced with a new exclusive method. By "mixing" both sisal and glass reenforcing fibres in a waterproof paper, an improved paper results, with greater resistance to tear, additional abrasion resistance when wet, improved puncture and shock resistance, and extra strength when subjected to static loading or continuous pull.

AMERICAN CASE HISTORY #1



Four cyclones grouped on roof serve the two sanding systems, patch department system and cut-up department system.

Five American systems develop maximum waste removal efficiency for LONG BELL's plywood plant at Vaughn, Oregon*

1. Separate systems serve two 8-drum sanders and deliver six tons of sander dust per shift to a surge bin 1,000 feet from the sanders. A special double-screw bottom meters the sander dust into a blower system that delivers the dust directly to the combustion chamber.
2. Separate systems serve the patch and cut-up department and deliver waste to a Rader high-pressure system that transports it to fuel storage.
3. Separate American system conveys waste from the log deck cutting saw to the Rader high-pressure conveying system for delivery to fuel storage.
4. Special surge bin receives chips from the windswept chipper. Chips are metered into a Rader high-pressure system for delivery to chip cars.
5. Exhaust systems above two Coe dryers and above two hot presses remove smoke and fumes from the building.

*International Paper Company, Long-Bell Division.

AMERICAN MEANS EFFICIENCY

AMERICAN SHEET METAL WORKS, Inc.
Manufacturers of Blowers
920 NE Glisan Portland Oregon BE 2-0111

News of Suppliers

- Promotions
- Appointments
- Plant Expansions
- Mergers & Acquisitions

• Three promotions affect top personnel of International Harvester motor truck division. ***Ralph M. Buzard,*** formerly manager of sales, is now general manager of the division. ***Louis W. Pierson,*** former assistant, is now manager of sales. Mr. Pierson's old post is filled by ***Wm. E. Callahan,*** formerly sales manager of the eastern region. Head man in motor truck operations is Vice Pres. ***Wm. C. Schumacher.***

• ***Harmer Co.,*** Portland and Eugene, Ore., mill suppliers, have been appointed dealers for "Sweed" gang saws, product of Jeddeloh Bros., Gold Hill, Ore. Harmer also carries the latest style Disston chipper knives and other lumber industry lines, including Armstrong, Chain Belt, Carborundum, Chapman Chemical and Skookum.

• Raybestos-Manhattan has appointed ***T. W. R. Latham*** as Los Angeles district manager; he'll supervise sale and distribution of industrial rubber products in the southwest. ***J. M. Ehman*** is the new assistant district manager at Birmingham.

INDUSTRIAL NO. 500

AIR ACTUATED DEFECT SAW

Industrial No. 500 Defect Saw

5 HP, 220/440 volt, 3 phase, 60 cycle, 1800 RPM ball bearing motor. Machine completely wired with all necessary switches and overload protection and is ready for operation.

Safe—Efficient—Accurate

Safe—safety guard clamps wood and automatically releases on completion of the stroke.

Efficient—Switch can be placed on the floor or at finger tip; oiler and air regulator; manufactured in left to right with the fence mounted on front or rear of the machine.

Accurate—roller bearing precision arbor; strokes adjustable from 0 to 90 stroke per minute by adjusting small air flow jet.

INFEED and OUTFEED ROLLER TABLES, and the INDUSTRIAL Precision Lumber stops make this air actuated DEFECT SAW Complete.

Write for information to:

TRI-STATE MACHINERY COMPANY

3000 Commerce Street - Dallas, Texas

429 Dapple Way - Eugene, Oregon

Manufactured by

Industrial Woodworking Machinery Co., Inc.

A-C Expands Sales Group

A NEW DEPARTMENT has been created within sales by the Construction Machinery Division of Allis-Chalmers Mfg. Co. This new department will devote its full time to growth development of dealers and their sales organization. **V. M. Holloway** (L) is the department head; he's a former assistant sales manager of the devision. **J. M. Haile** (C), ex-eastern manager, is promoted to Mr. Holloway's last position. **K. A. New** (R) succeeds Mr. Haile as eastern manager in New York. All three started with Allis-Chalmers before World War II and served in the armed forces during the war.

Laucks Now Has "Sentry" Representative in Manila

• Laucks Laboratories, Inc., Seattle, has appointed Aurelio Lagman, Jr., of Manila as its sales and service representative in the Philippines.

Laucks manufactures the "Sentry" continuous moisture detector, an electronic device which scans moving veneer, lumber and other forest products for moisture content.

Mr. Lagman, who recently received degrees in mechanical and electrical engineering at the University of the Philippines, and Polytechnic Colleges of the Philippines, was recently in Seattle for specialized training in the installation and maintenance of "Sentry" equipment. He returns to the islands in June, at which time he will install one of the new Laucks systems at the Santa Clara Lumber Co.'s Zamboanga plant.

Serving Southwest Oregon

A NEW TRUCK PARTS store has been opened by Roberts Motor Co. of Portland at 3230 North Pacific highway in Medford to serve Southwestern Oregon. This firm to be known as Roberts Motor Inc. of Oregon has purchased an acre of land and has remodeled a modern concrete building to serve as a parts store and sales area for Kenworth Trucks. Truck parts lines handled include Timken, Brown-Lipe, Spicer, Kysor and Gemmer. **WES FORLER,** who has been with Roberts in Portland for the past 11 years, is parts manager at Medford.

A New Concept in Continuous Moisture Control

LAUCKS *Sentry* CUSTOM
CONTINUOUS MOISTURE DETECTOR

The new Custom introduces an outstanding advance in SENTRY systems for measuring and recording moisture content of moving veneer, lumber, paper and various unrelated or non-cellulose materials.

The Custom accents unitized construction with primary circuits in lightweight "plug-in" type drawers. The moisture range has been expanded from zero to fibre saturation. Moisture classification (marking) of stock is governed by a single control.

Designed primarily for larger installations, Custom models are also ideal for overseas use. Through an exchange of drawers the entire system may be serviced or expanded without delay.

SENTRIES range from single level marking units to multi-level marking, recording and counting systems and are priced from $3,950. You are cordially invited to write for detailed information.

LAUCKS LABORATORIES, INC.

1201 Poplar Place — Seattle 44, Washington

A leader in wood technology for 49 years

VICTOR
New, Improved High Frequency
VENEER EDGE GLUER

Saves Money FOR ITS OWNERS!

- Provides 3% to 5% more recovery.
- Reclaims Strip, Fishtail, and other random width materials.
- Produces a uniform quality product.
- Permits using narrower pieces of high grade veneer otherwise unusable.
- Saves on glue and labor.
- Boosts man-hour production.
- Speed range 15 to 75 feet per minute.

WRITE OR PHONE
We will send you complete information on the Victor High Frequency Edge Gluer and names of nearest users.

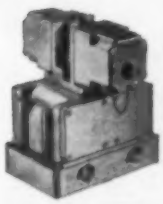
E. V. PRENTICE CO., LTD.
5936 Fraser Street
Vancouver 15, B. C.
Phone: Elgin 5212

E. V. PRENTICE CO.
2303 N. RANDOLPH ST. • PORTLAND 12, OREGON
Phone: AT 2-3262

Not Hurt by Dirt!

another *Plus Value*

Poppet seats, cleaned on each cycle . . . prolong valve life . . . eliminate costly maintenance



NOPAK-MATIC valves

reduce maintenance and downtime! Nopak-matic poppet-type air control valves are designed to tolerate dirty air and keep going. New design and materials insure millions of trouble free cycles.

Other *NOPAK-MATIC* Features

- Exclusive "Flow-Director" pilot heads for greater valve versatility.
- Complete pilot head interchangeability.
- Replaceable, self-cleaning seats.
- New design for fast maintenance.
- 100% J.I.C. conformance at no extra cost.
- Simplified piping.

SEND FOR CATALOG 105

NOPAK *VALVES and CYLINDERS*

GALLAND-HENNING NOPAK DIVISION • 2779 S. 31st St., Milwaukee 46, Wis.

This Guide To Quality
MORTISING and BORING TOOLS
Is Yours For The Asking

GREENLEE

Write for Catalog 34-M today. Contains complete information.

GREENLEE TOOL CO. — 2175 HERBERT AVE. ROCKFORD, ILL.

REDUCE COSTS with STETSON-ROSS

Another Portalloy First

FORGED STEEL CAMEL BACK CHAIN

—Like all Portalloy chains, longer life at no additional cost

ask for details about this chain, and all Portalloy standard chains . . . also rubber covered Camel back

FEATURING
SOLID SIDEBAR
FOR MAXIMUM WEAR

Available sizes: H-78, 130, 138

PORTLAND CHAIN MANUFACTURING CO.

IN THE HEART OF THE LOGGING INDUSTRY

4000 N.W. Yeon • Portland, Oregon • CApitol 8-9219

New Equipment at Work

• E. V. Prentice Co. recently installed Raimann automatic veneer patchers in eight western plywood plants. In Oregon: ***Diamond Lumber Co.,*** Tillamook; ***Multi-Use Panel Corp.,*** Junction City; ***Rose City Plywood,*** Portland; ***Willamette Plywood,*** Aumsville; ***Multnomah Plywood,*** Portland, bought their fourth patcher, equipping it with Victor patch strip loader and Victor refuse hog. In Washington: ***Fort Vancouver Plywood,*** Vancouver. In California: ***Lund Plywood Co.,*** Crescent City, and ***Pacific Coast Plywood,*** Sonoma.

• Mater "Hi-Standard Duty" tong dog conversion kits with fully oscillating dogging, non-defacing in a complete package, were recently installed by ***San Poil Lumber Co.,*** Republic, Wash., and ***Coos River Lumber Co.,*** Coos Bay, Ore.

Wyoming Mill Gets New Kiln for Ponderosa Pine

• One of the very few kiln installations in the state of Wyoming is the new Moore Cross-Circulation double track kiln 56 feet long recently erected by the Berman Lumber Co. at Newcastle.

This new kiln is of the most modern design. It is equipped with steel fin pipe coils to secure maximum efficient heating results, large diameter disc fans to give uniform air circulation and Moore-Kiln Master Autographic controller instrument equipped with dual dry bulb. This instrument controls and records the drying temperature throughout the kiln and also automatically regulates the opening and closing of the roof ventilators during the seasoning process. The air circulation in the kiln is automatically reversed at predetermined intervals eliminating the necessity of the operator doing this manually.

Owner Don Berman, takes great pride in doing quality kiln drying of Black Hills Ponderosa pine for his customers. The mill itself consists of a circular head saw and gang saw producing about 20 M per shift. The new kiln now permits Berman to quality dry their product to the exacting needs of particular customers.

• There are now nine pulp and paper mills in Oregon.

• I. W. Johnson Engineering Co., Tacoma, Wash., has made the following recent sales of sawmill equipment: a new Johnson rack-and-pinion 3-block carriage equipped with anti-friction trucks, trout setworks and air motor drive for ***U. S. Plywood Corp.,*** Kosmos, Wash.; 12x60" edger for ***Weyerhaeuser Timber Co.'s*** Mill B at Everett, Wash.; 8x48" edger for ***Buchanan Lumber Co.,*** Olympia, Wash.; and a new stud stacker for ***Lindsey Lumber Co.,*** Fortuna, Calif.

• Sumner Iron Works is building the world's largest barker for ***Pacific Lumber Co.,*** Scotia, Calif. It is a Bellingham-type hydraulic barker and it will take redwood logs up to 45' long and 10' in diameter.

• ***Granite State Veneer Co.,*** North Stratford, N. H., has brought the first new chipper sold to a New England plant. It's a Sumner 72" vertical chipper.

ONLY
Bendix-Westinghouse
AIR BRAKES
GIVE YOU ALL 3
MOST POWER
MOST DEPENDABILITY
MOST ECONOMY

Convert to Air Brakes with Easily Installed Bendix-Westinghouse "Do-It-Yourself" FIELD KITS

Handy Bendix-Westinghouse field installation kits designed for every make and model truck make the job fast and easy. It costs much less than you might imagine and actually pays you back in added braking economy, safety and comfort. Stop in for a free estimate.

Phone BElmont 4-8401

Truck and Industrial Equipment Co.

7 N.E. OREGON STREET • PORTLAND 14, OREGON

when you're handling CHIPS nothing beats air!

Specifically . . . nothing beats CONVEYAIR for moving chips, hog fuel, planer shavings, sawdust or other granular materials . . . any distance, anywhere, at LESS COST.

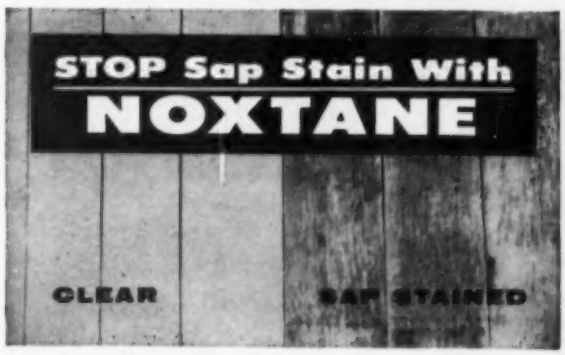
Write for full details of a Conveyair system in your mill.

pneumatic materials handling systems
Conveyair

Conveyair Sales Ltd. 125 W. 1st St., North Vancouver, B.C. YOrk 1166

Conveyair Inc. 921 S.W. Washington Ave., Portland 5, Ore. CApitol 2-1291

NEW HOMES WILL BE BUILT
There's business for hustlers, at both retail and manufacturing levels—We are hustling.
YOU'LL HEAR FROM US... our woodsmen are back cutting timber and beautiful Western Pine logs of all species are rolling to the mills.
You can be sure of High Quality Precision made products from us—Lumber, Mouldings, Millwork and Panels—*in mixed cars if you choose.*
The Ralph L.
SMITH
Lumber Company
WPA
Mills at Anderson, Red Bluff, Castella, Wildwood, and Mt. Shasta, California
Sales Office at Anderson, California



SAVE UP TO $150 PER MBM! Prevent sap stain with NOXTANE at a cost of only a few cents per thousand board feet.

NOXTANE dip or spray is a *complete* formulation—*no mixing!* Keeps lumber bright, clear, stain-free. Easy to use—can't harm hands. Dissolves rapidly . . . no arsenic or mercury . . . non-irritating and dustless . . . resists leaching from rain . . . controls surface mold and decay organisms. Conveniently packaged in 10 lb. bags. Just mix one bag to 100 gallons of water.

NOXTANE can add thousands of dollars yearly to your profits.

Write For Brochure . . . that tells how to prevent degrading easily, economically.

WOOD TREATING CHEMICALS CO.

5137 Southwest Ave. • St. Louis 10, Mo.
1896 Dennison Ave. • Oakland 6, Calif.

SPEAR & JACKSON

Circular SAWS

If you are interested in saws that cut two to three times as much lumber—sorry we can't help you!

But if you are interested in cutting well manufactured lumber with trouble-free saws—that's where we come in.

By locating our factory at Eugene, Oregon, close to the center of the lumber industry, we can offer direct factory - to - mill service in custom - made saws—good saws made on the Pacific Coast.

SPEAR & JACKSON

EUGENE, OREGON

Band, Gang, Circular Saws, Teeth and Holders

"The Saw Without a Flaw"

MANUFACTURERS • DISTRIBUTORS

SOUTHERN and WESTERN WOODS

SALES DEPT. FOR YONCALLA LUMBER CO., YONCALLA, ORE.
GREEN FIR DIMENSION—BOARDS—CUTTING

EXCHANGE SAWMILLS SALES CO.

1400 R. A. LONG BUILDING
TWX KC 484

Since 1879

KANSAS CITY, MISSOURI
Phone: Victor 2-6560

IH Trucks Celebrate 50th Year

• IT WAS IN 1907 that a high-wheeled, two-cylinder "Auto Wagon" first bounced over the rutted, muddy roads of America and put International Harvester Co. in the motor truck manufacturing business.

The company thus gave the farmer another useful tool, a motorized farm wagon, built to negotiate the rough roads between farm and market.

Today International Harvester produces a complete line of motor trucks, from pickup models of 4,200 lbs. GVW to giant off-highway haulers rated at 96,000 lbs. GVW.

OF THE 2,610,441 International trucks built during the 1907-1956 period, more than 1,100,000 currently are in use throughout the nation.

International's Fort Wayne Works is today the world's largest single plant devoted exclusively to the manufacture of heavy-duty motor trucks.

In 1946, the company began production of a new line of highly specialized trucks at a new plant in Emeryville, Calif. The products were heavy-duty "Western type" models. Ranging up to 90,000 pounds in gross vehicle weight, these models were originally designed to conquer the distances and mountainous terrain of the Western states and rugged off-highway hauling jobs. Each of these big Western-type models is tailor-made for the requirements of the job it is to perform.

Although producing no passenger cars, International Harvester is the world's fourth largest manufacturer in the automotive field.

BLO-R-DRY

THE ECONOMICAL LUMBER DRYER

A low initial cost, low operating cost Dry Kiln developed and engineered by Gram Development Company with heating equipment installed and engineered by Iron Fireman. **Can be obtained on lease basis with very little capital expenditure.** A progressive Kiln with from 140,000 to half million BM per week. Newly developed warm air return control for economical cold weather operation. Let us show you a Blo-R-Dry.

BLO-R-DRY, Inc.

GRAM DEVELOPMENT COMPANY
Portland Trust Building — Portland 4, Oregon
Phone: CApitol 8-9770
In Canada: Canadian Sumner Iron Works Ltd., Vancouver, B. C.

Klamath Iron Works

P. O. Box 129 • Klamath Falls, Oregon
Tuxedo 4-7721

ORIGINAL DESIGNERS and BUILDERS
COMPLETE LINES SAWMILL MACHINERY

REPRESENTATIVES
UNITED STATES MACHINERY CO., NEW YORK, N. Y.
WASHINGTON MACHY. & SUPPLY CO., SPOKANE, WASH.
ELECTRIC POWER EQUIPMENT LTD., VANCOUVER, B.C.

Write us, or our nearest dealer . . .for complete details.

We operate our own Foundry

TIMBER LAND FACTORS

SINCE 1880

We buy—sell—manage—cruise—appraise
and
engineer timber properties

THE JAMES D. LACEY COMPANY

231 S. La Salle St.
Chicago 4, Ill.

321 White Building
Seattle 1, Wash.

Barnett National
Bank Building
Jacksonville 2, Fla.

1001 Ouachita National
Bank Building
Monroe, La.

The Biggest
Little Hotel in

SAN FRANCISCO

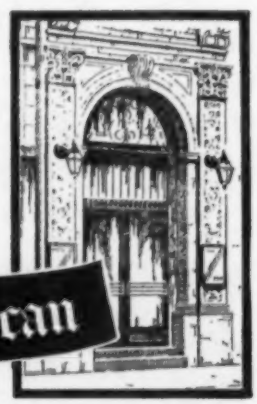
Downtown . . . Geary at Powell
½ block to Union Square

Rates from
with bath 4.00 single

GARAGE SERVICE

HOTEL Franciscan

Telephone Douglas 2-2200



BUYERS GUIDE AND CLASSIFIED SECTION

List of companies supplying Machinery, Equipment, Supplies and Services used in the Forest Industries.

AIR CYLINDERS & VALVES
Caldwell Machinery Co., Portland, Ore.
Ledeen Mfg. Co., Los Angeles, Calif.
John M. O'Brien Co., Portland, Ore.

AIR MOTORS
Gardner-Denver Co., Quincy, Ill.
Salem Equipment & Supply Co., Salem, Ore.

APPRAISALS
General Appraisal Co., Seattle, Portland, San Francisco

ARCHES
Hyster Company, Portland, Ore.

AXLES
Clark Equipment Co., Buchanan 8, Mich.
Eaton Manufacturing Co., Cleveland, Ohio
Roberts Motor Co., Portland
Timken-Detroit Axle Co., Detroit

BAND WHEEL GRINDING
Wilder Saw Works, Fresno, Calif.

BARKERS, LOG
Sumner Iron Works, Everett, Wash.
Nicholson Manufacturing Co., Seattle
Soderhamn Machine Mfg. Co., Portland, Ore.

BEARINGS
Chain Belt Co., Seattle, Portland, San Francisco
Dodge Manufacturing Co., Mishawaka, Ind., San Francisco, Portland, Seattle
Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Portland, Los Angeles

BELTING AND PACKING
Gates Rubber Co., Denver
J. W. Minder Chain & Gear Co., Portland
Raybestos-Manhattan, Inc., Passaic, N.J.; Portland, Seattle
U. S. Rubber Co., Mechanical Goods Div., New York

BLOWPIPE SYSTEMS
American Sheet Metal Works, Portland
Anderson Blowpipe Mfg. Co., Seattle
Archer Blower & Pipe Co., Portland and Seattle
Phelps Bros., Inc., Eugene, Ore.

BLUE PRINTING
Chas. Bruning Co., Inc., Portland

BOILERS AND ACCESSORIES
Gabriel Boiler & Fabrication Co., Portland
Seattle Boiler Works, Seattle

BOILER WATER—Treatment
Coast Neutralizer Corp., Portland, Ore.

BOOMS—Loading
Eugene Truck & Machine Co., Eugene, Ore.

BOOM BOATS
L. S. Baier & Associates, Portland
Gunderson Bros. Engineering, Portland
Nichols Boat Works Co., Hood River, Ore.

BURNERS—Refuse
Phelps Brothers, Inc., Eugene, Ore.

CARRIAGES—Riderless—Automatic
Corley Mfg. Co., Chattanooga, Portland, Little Rock
Filer & Stowell Co., Milwaukee, Wis.
Forest Products Machy. Corp., Salem, Ore.
I. W. Johnson Engineering Co., Tacoma
Mater Machine Works, Corvallis, Ore.
Monarch Forge & Machine Wks., Portland, Ore.
Peters Co., Portland, Oregon
Sumner Iron Works, Everett, Wash.

CARTHAGE MACHINE CO. - CHIPPERS - WOOD ROOM EQUIPT.
HEPPENSTALL CO. - ALLOY CHIPPER & HOG KNIVES
RICE BARTON CORP. - PULP & PAPER MACHINERY

RAY SMYTHE CO.
511 Park Bldg. • 729 S.W. Alder St. • Portland 5, Ore. • Phone: CApitol 3-0502-2238

FOR SALE
1—G K Straight Wheel Knife Grinder. 38" Acme Bar, Complete with 2 motors. Good condition. Price $800.00.
WILDER SAW WORKS
2520 Ventura Ave., Fresno 1, California
Phone: Day - ADams 7-1486; Night - BAldwin 7-6545

Used Gearmotors—Speed Reducers
Special—75 hp Pacific (herringbone) units 34 rpm output.
Cascade Machinery & Electric, Inc.
4600 E. Marginal Way Seattle 4, Washington

BARTLETT ELECTRIC CO.
Lloyd Bartlett, registered engineer
INDUSTRIAL—POWER—COMMERCIAL WIRING
EM-4-2244 Emergency Service
430 S. Church St. Salem, Ore.

COLUMBIA RUBBER MILLS
Molded Rubber Products
Washers • Bushings • Gaskets • Rolls
12022 S.E. Powell Blvd.
Phone PR 4-4824
Portland 66, Ore.

PHELPS BROS.
REFUSE BURNERS
BLOW PIPE SYSTEMS
1885 Highway 99 North
Eugene, Oregon
DI 4-5821
Phelps Burners, Ltd.
P.O. Box 188 Williams Lake, B.C.

MECHANICAL LOG BARKERS
Nicholson Manufacturing Company
Designers—Builders of Special Machinery and Plants
35125 "A" Street S. E. • TEmple 3-4800 • Auburn, Washington

Buyers Guide & Classified Section
Advertising Rates

DISPLAY CLASSIFIED BULK SPACE RATES

1 to 44 inches per year	$10.00 per column inch
45 to 89 inches per year	9.00 per column inch
90 to 179 inches per year	8.00 per column inch
180 to 359 inches per year	7.00 per column inch
360 or more inches per year	6.50 per column inch

Classified—(No Display)—Positions and Help Wanted 15c per word. $5.00 minimum. $1.50 additional for box number.

No agency discounts on classified or Buyers Guide space.
Closing date for set copy for July 12th issue—July 1st

Send instructions to

THE LUMBERMAN
519 S.W. PARK PORTLAND, OREGON

BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

Save on Your
INDUSTRIAL TRACK

FOSTER QUALITY — FULLY GUARANTEED

RELAYING RAILS

Handle more cars better—cost less to install and maintain. Foster stocks all Rail Sections 12# thru 175#, Switch Material and Track Accessories.

SEND FOR CATALOGS

RAILS - TRACK EQUIPMENT - PIPE - PILING

L B FOSTER co.

PITTSBURGH 30 • NEW YORK 7 • CHICAGO 4
ATLANTA 8 • HOUSTON 2 • LOS ANGELES 5

SEATTLE REFUSE BURNERS

Prefabricated For Easy Erection

Send for Catalog No. 11

- BOILERS—NEW & USED
- TANKS, STACKS, CONVEYORS
- CUSTOM FABRICATION WORK

SEATTLE BOILER WORKS, INC.
Since 1889

9227 East Marginal Way • Seattle, Wash.
Phone: Day - RAinier 0737 • Night - Gibson 7028

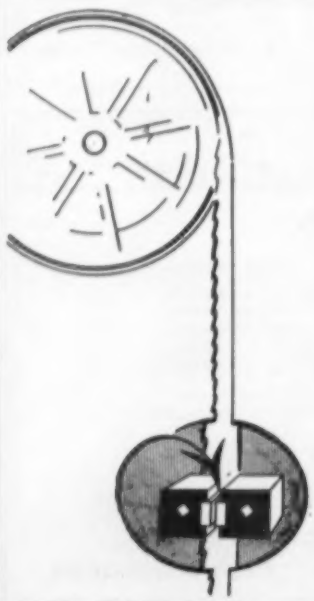
"Jet Dozer"

NICHOLS
Steel Boom Pond Boats

Nichols steel boom boats and tug boats, are used wherever logs are sorted, handled or towed. 16'-20'-24' boom boats. Ask about our Jet Dozer Boats.

Write for pamphlet with names of users and other descriptive matter.

NICHOLS BOAT WORKS CO.
HOOD RIVER, OREGON
Phones: Shop: 6112 Office: 4284



CHAMPION
E-Z-GLIDE
SAW GUIDE STOCK

Easy on saws

The new improved
SAW GUIDE STOCK
for headrigs
EDGERS
ALSO FOR
GANG SAW HORN BLOCKS

write for circulars

Manufactured to your specifications by

CHAMPION FRICTION COMPANY
EUGENE, OREGON

CASTINGS—Iron, Steel and Brass
Electric Steel Foundry, Portland
Link - Belt Co., Seattle, Portland, San Francisco

CHAIN—Steel Roller and Malleable
Chain Belt Company and Baldwin-Duckworth Division, Seattle, Portland, San Francisco
Link - Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Los Angeles, Portland
Moline Malleable Iron Co., St. Charles, Ill.; Tacoma, Wash.; Seattle, Portland Los Angeles
Jeffrey Mfg. Co., Columbus, Ohio
Northwest Chains and Sprockets, Inc., Seattle, Portland
Portland Chain Mfg. Co., Portland

CHAIN SAWS—SEE POWER SAWS

CHIP CAR OSCILLATORS
Western Machinery Corp., Portland, Ore

CHIP HANDLING
Archer Blower & Pipe Co., Seattle and Portland
Conveyair Inc., Portland, Ore.
Industrial Components, Inc., Portland Ore.
Rader Pneumatics, Inc., Portland

CHIPPERS
Sumner Iron Works, Seattle
D. J. Murray Co., Wausau, Wisc.
Carthage Co., Carthage, N. Y.
Soderhamn Machine Mfg. Co., Portland Ore.

CAR CONTROLS—Automatic
Industrial Components, Inc., Beaverton Ore.

CRANES—Overhead
Ederer Engineering, Seattle
Harnischfeger Corp., Milwaukee, Wisc
Berger Engineering Corp., Seattle

CRANES AND SHOVELS
Bucyrus-Erie Co., Seattle, Portland, So Milwaukee
Insley Mfg. Co., Indianapolis, Ind.
Link-Belt Speeder Corp., Chicago, Ill., Seattle, Portland, San Francisco
Northwest Engineering Co., Chicago, Seattle, Portland, San Francisco
Manitowoc Engineering Co., Manitowoc, Wisc.
Unit Crane & Shovel Corp., Milwaukee, Wis.
Unit Shovel Co., Milwaukee, Portland Seattle.
Washington Iron Works, Seattle

CREOSOTED STAVE FLUMES & CULVERTS
Federal Pipe & Tank Co., Seattle

CUTTERHEADS
Henry Disston & Son, Philadelphia, Pa
Jones & Orth, Seattle, Wash.

CYLINDERS—AIR & HYDRAULIC
John M. O'Brien Co., Portland, Ore.
Salem Equipment & Supply Co., Salem, Ore.

CYLINDER HEADS, REBUILT
Engineering Development Corp., Seattle
Northwest Motor Welding, Portland, Ore
Brook Motor Corp., Chicago, Seattle, Portland, Savannah, Memphis, Tampa

EARTH MOVING EQUIPMENT & GRADERS
Huber-Warco Company

ELECTRICAL EQUIPMENT—Motors, Wire, etc.
Cascade Machinery Co., Seattle
General Electric Co., Schenectady, N. Y.; Seattle, Portland, San Francisco, Los Angeles
Kirk Hillman Co., Seattle, Wash.

WHEN YOU WRITE OR PHONE ADVERTISERS, IT WILL HELP ALL OF US IF YOU WILL MENTION THE LUMBERMAN

ELECTRIC FEEDWORKS
Charles Weaver Co., Detroit, Mich.
Zidell Machinery & Supply Co., Portland, Ore.

ELECTRICAL MOTOR REPAIR
Star-Delta Electrical Works, San Francisco

ENGINES—DIESEL
Caterpillar Tractor Co., Peoria, Seattle, Portland, San Francisco
Cummins Engine Co., Columbus, Ind., Portland, Seattle

General Motors, Detroit, Seattle, Portland, Stockton, San Francisco, Los Angeles
Gunderson Bros. Engineering, Portland, Ore.
International Harvester Co., Chicago, Portland, Seattle, San Francisco
Precision Engineering Co. of Sacramento, Calif.
Waukesha Motor Co., Waukesha, Wisc., Seattle, Portland, Ore., San Francisco, Los Angeles

ENGINES—GAS
Ford Motor Company, Industrial Engine Division, Dearborn, Mich.
Chrysler Industrial

ENGINEERS—FORESTRY & MILL
Columbia Pacific Corp., Portland, Ore
D. E. Collinson, Milwaukie, Ore.
Industrial Development Co., Tacoma
Production Management Engineering Association, Portland, Los Angeles, San Francisco
W. H. Rambo, Portland
K. B. Wood & Assoc., Portland

ENGINEERS—INDUSTRIAL
Production Management Engineering Association, Portland, Los Angeles, San Francisco

ENGINEERS' SUPPLIES
Chas. Bruning Co., Inc., Portland

FANS AND BLOWERS
American Sheet Metal Works, Portland
Anderson Blowpipe & Mfg. Co., Seattle
Archer Blower & Pipe Co., Portland Seattle

FILES
Atkins Saw Div., Seattle, Portland, San Francisco
Nicholson File Co., Providence, R.I.
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland, Seattle, San Francisco

FINANCING EQUIPMENT
Doug Gerow Finance Co., Portland, Ore
Ray Parker Machy. Sales Co., Portland, Ore.

FIRE PROTECTION EQUIPMENT
D. B. Smith & Co., Utica, N. Y.

FLEXIBLE COUPLINGS
Northwest Chains & Sprockets, Inc., Seattle, Portland

FRICTION BLOCKS
Champion Friction Co., Eugene, Ore.

GANG SAW GUIDES
Champion Friction Co., Eugene, Ore.

CONVERT YOUR EQUIPMENT INTO $$$

There is much potential business FOR YOU in each issue of THE LUMBERMAN

Over 23,000 copies monthly—with an estimated 35,000 readers

OTHERS ARE DOING IT — YOU CAN DO IT, TOO!!

Write for Advertising Rates

AIR TONG DOGS

Give your sawyer a better chance to get more bit on that log or cant—and at the same time save that back stand—these tong dogs hold the wood both top and bottom.

38½" OPENING (Plus)

BOTH RIGHT & LEFT HAND

NON-DEFACING

SAVE YOUR BACKBOARDS

FOR MORE INFORMATION CALL

Pacific Machinery Co.
Medford, Oregon - SPring 2-9171
or write P. O. Box 5, Medford, Oregon

ANDERSON HI-EFFICIENCY CYCLONIC INCINERATORS

Cleaner and Faster burning

Easily installed

Structural members air cooled

Cyclonic burning action

• **Blower Systems** • **Dust Control** • **Fans** • **Specialty Items**

ANDERSON BLOWPIPE & MANUFACTURING CO., INC.
5960 4th Ave., S. • Seattle 8, Wash.

WHISTLE SIGNALS
The most practical whistle

for all normal uses. Larger sizes with deeper tones for special applications.

SIZE 1-A WHISTLE WITH ELECTRIC VALVE

Cunningham Air Whistles

"WHISTLING FOR OVER 30 YEARS"

BUYERS GUIDE and CLASSIFIED SECTION

SCOUGAL RUBBER MANUFACTURING CO.
WE CAN MANUFACTURE ANYTHING OF RUBBER
2731 First Ave. So. Seattle, Wash.

CALL US REGARDING AIR PROBLEMS

Terrace 8-7323
Terrace 8-7324
P. O. Box 398
Escalon, Calif.

"Good Used Machinery Values"

1—54" Marshco vertical B.B. Band Resaw blower, pipe, cyclone, motors & controls
1—77A Model 5 Am. 6x15 - 8K Hd Hd planer, 8H side hds, individual motors & V belt drive, top & bottom profile
1—8S Newman 6 x 20 - 4K Hd Hd B.B. planer blower, pipe, cyclone, motors & controls
1—8'-0" double end trimmer, motor & V belts
1—04 Cat with cable dozer & drum
1—Model F.N.P. Hyster 42" carrier
1—K8BF, International, 18'-0" roll bed Lumber Truck, A1 cond.
1—½ HP, 1800 R.P.M. 110/220 V Cap. Motor
1—1 HP, 1800 R.P.M. 220/440 V Howell Motor
2—1 HP, 59 R.P.M., 220/440 Worm Reducers
1—2 HP, 12.3 R.P.M., 220/440 Master Reducer
1—150 HP, 1160 R.P.M. 440 V 8B Wagner motor
1—200 HP, 1750 R.P.M. 440 V 5B Wagner motor

Starters and Disconnects.

FACTORY AGENT

Golland-Henning "NOPAK" Cylinders
Air, Oil, Water Hydr. Valves—
Hand, Foot—Nopak-matic, Johnson Mfgr. Co.
"SEATTLE" Cant Gang Mills
"New Conception" Flat Gang
3/16" and Up Precision Boards

Caldwell Machinery Co.
EXPERIENCE - SERVICE - ECONOMY
738 N.W. Glisan St., Portland 9, Ore.
CA 6-3568 Res. NE 6-4454

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

26" RING TYPE BARKERS

60" Chippers • The Stemm Mobile Barking Chipper

STEMM MANUFACTURING CO., Leavenworth, Wash.

BUYERS GUIDE and CLASSIFIED SECTION

BAND SAWMILLS
Albany Machine & Supply Co., Albany, Ore.
Corley Mfg. Co., Portland, Ore., Chattanooga, Tenn., Little Rock, Ark.
Gunderson Bros. Corp., Portland, Ore.
Keystone Machine Works, Roseburg, Ore
"Sunbo" Mill Engineering & Supply, Seattle
National Machinery Sales, Gold Hill, Ore
Portland Machinery Co., Portland
Schnitzer & Wolf Machinery Co., Portland, Ore.
Soderhamn Machine Mfg. Co., Portland, Ore.
Star Machinery Co., Portland, Seattle
Western Steel & Supply Co., Dallas, Ore

GEARS AND GEAR MOTORS
Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Portland, Los Angeles
Pacific Gear Works, Los Angeles, San Francisco
Western Gear Works, Seattle

GLUES
Reichhold Chemicals, New York City

GRINDING WHEELS
Borg Warner Corp., Atkins Saw Div., Indianapolis
Norton Co., Worcester, Mass.; Seattle, Portland, San Francisco
Simonds Abrasive Co., Philadelphia, Pa.
Simonds Saw & Steel Co., Fitchburg Mass.; Seattle, Portland, San Francisco

HOGS
Portland Machinery Co., Portland
Sumner Iron Works, Everett, Wash

HOSE
Aero-Coupling Corp., Burbank, Calif. Portland, Ore.
B. F. Goodrich Co., Akron
Firestone Tire & Rubber, Akron
U.S. Rubber Co., New York City

HOT PLATE PRESSES
Allied Northwest Machine Tool Corp. Portland
Columbia Div. of The Lodge & Shipley Co., Hamilton, Ohio
Washington Iron Works, Seattle
Williams-White & Co., Moline, Ill
R. D. Wood Co., Philadelphia

HYDRAULIC CONTROL VALVES
Vickers, Inc., Detroit, El Segundo, Calif. Seattle
The Oilgear Co., Milwaukee, Wis., Los Angeles, Seattle

INSTRUMENTS AND REPAIRS
Instruments Sales & Service, Portland
Moore Dry Kiln Co., No. Portland

KILNS AND DRIERS
Gram Development Co., Portland, Ore
C. M. Lovsted Co., Seattle, Portland, San Francisco
Moore Dry Kiln Co., Jacksonville, Fla., North Portland, Brampton, Ont.; Vancouver, B. C.

KNIVES
Henry Disston & Sons, Philadelphia
Ohio Knife Co., Cincinnati, Portland, Seattle, Los Angeles, Oakland, Vancouver, B. C.
Simonds Saw & Steel Co., Fitchburg, Mass., Seattle, Portland, San Francisco
Ray Smythe, Portland

KNIFE GRINDING MACHINERY
Hanchett Manufacturing Co., Big Rapids Mich., Portland

KNOT SEALERS
Western Machinery Corp., Portland, Ore

LEASING MACHINERY
Ray Parker Machinery Sales Co., Portland, Ore.

LOADBINDERS
American Logging Tool Corp., Seattle, Portland, San Francisco, Los Angeles
Atkins Saw Div.—Borg-Warner Corp., Indianapolis
Thomas Laughlin Div., Portland, Maine
Lebus Rotary Tool Works, Longview, Texas

LOANS
Doug Gerow Finance Co., Portland, Ore

LOGGING BLOCKS, SUPPLIES AND TOOLS
Berger Engineering Co., Inc., Seattle
Electric Steel Foundry Co., Portland Seattle
Eugene Equipment Co., Eugene, Ore
Howard-Cooper Corp., Portland, Seattle
Skookum Co., Inc., Portland
Washington Iron Works, Seattle

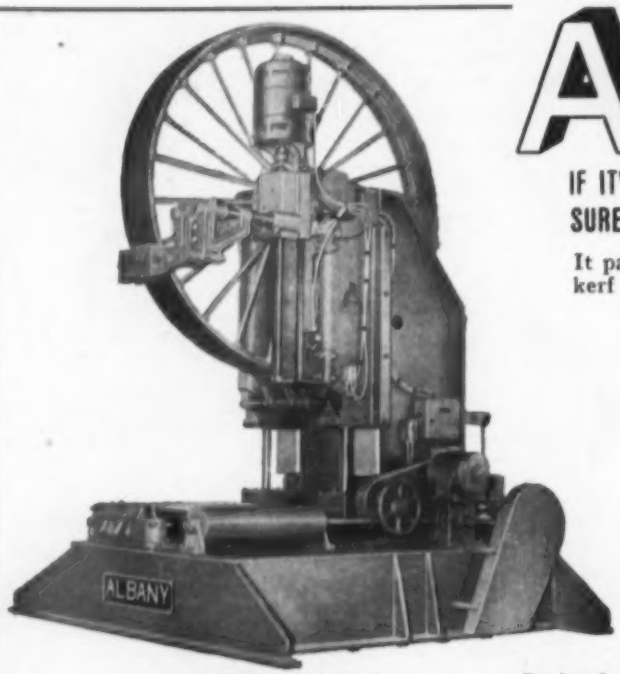
LOG LOADERS (Also See CRANES)
R. G. LeTourneau, Inc., Longview, Texas
Washington Iron Works, Seattle
Skagit Steel & Iron Works, Sedro-Woolley, Wash.

LOG STACKERS
R. G. LeTourneau, Inc., Longview, Texas

LOGGING TRAILERS
Trailmobile Co., Cincinnati
Reliance Truck & Trailor Co., San Francisco

LUMBER CARRIERS AND LIFT TRUCKS
Gerlinger Carrier Co., Dallas, Ore.
Hyster Co., Portland, Seattle
Clark Equipment Co., Ross Carrier Line, Portland, Seattle, San Francisco

LUMBER FINANCING
Douglas, Guardian Warehouse, Corp., New Orleans, Portland, Los Angeles, San Francisco



ALBANY 7 ft. MILL
Built in 6, 7, 8 and 9 ft.

ALBANY
THE BEST FOR LESS

IF IT'S A BAND MILL YOU ARE THINKING OF — BE SURE AND SEE ALBANY — FOR THE BEST FOR LESS

It pays for itself over a circular in a short time in kerf alone, plus better manufactured lumber.

Outstanding Features:

- Upper safety pressure type guide.
- Straining device is knife edge type throughout and is absolutely anti-friction.
- Top wheel can be moved towards or away from the sawline without changing the strain ratio.
- Tilting of upper wheel is accomplished by raising only one of the columns independent of the other by disconnecting the jaw clutch.
- Adjustment for upper wheel for cross line by special eccentric shafts in upper end of column.
- . . . and many other Outstanding Features FOUND ONLY IN ALBANY.

Other ALBANY products we manufacture:

Random Length Trimmers — Air-Lift Overhead — Air-Lift Undercut, Wheel Type — Selective & Automatic Overhead — Resaws — Line Bars — And Other Sawmill Machinery. Chain Drive Trimmer.

ALBANY MACHINE AND SUPPLY COMPANY ALBANY, OREGON
Re'ne Fritz, Manager • Telephone WAbash 8-9441

LUMBER STACKERS, UNSTACKERS, LOADERS AND HOISTS

C. M. Lovsted & Co., Inc., Seattle
Moore Dry Kiln Co., Vancouver, B. C., Brampton, Ont., Jacksonville, Fla., North Portland
Stetson-Ross Machine Co., Seattle

OILS AND GREASES

General Petroleum Corp., Los Angeles, San Francisco, Portland, Seattle
Lubriplate Div., Fiske Bros. Refining Co., Newark, N. J.; Seattle, Portland
Richfield Oil Corp., Los Angeles
Shell Oil Co., San Francisco
Standard Oil Co., San Francisco, Seattle, Portland, Spokane, Tacoma, Medford
Texas Company, The, Seattle, Portland, San Francisco
Tide Water Associated Oil Co., San Francisco, Los Angeles, Portland, Seattle
Union Oil Co., Los Angeles, San Francisco, Portland, Seattle

OIL FILTERS

Luber-Finer, Inc., Los Angeles

OUTBOARD MOTORS

Evinrude Motors, Wilwaukee, Wisconsin
Johnson Motors, Waukegan, Ill.

PIKE POLES—ALUMINUM

Alloy Welding & Fabricating Co., Portland

PIPE (Drainage)

Armco Drainage & Metal Products, Inc., Berkeley, Los Angeles, Portland, Seattle

PIPE, TANKS, STACKS

Federal Pipe & Tank Co., Seattle
Seattle Boiler Works, Seattle, Wash

PLANING MILL AND WOODWORKING MACHINERY

General Machinery Co., Portland
Greenlee Tool Co., Rockford, Ill.
Irvington Machine Works, Portland, Ore
Mereen - Johnson Machine Co., Minneapolis, Minn.
Newman Machine Co., Greensboro, N. C
Stetson-Ross Mach. Works, Seattle
S. A. Woods Machine Co., Portland, Ore
Mattison Machine Works, Rockford, Ill

PLANT DESIGN AND CONSTRUCTION

W. H. Rambo, Portland, Ore.

PLYWOOD AND VENEER MACHINERY AND SUPPLIES

Allied Northwest Machine Tool Corp., Portland, Ore.
Coe Mfg. Co., Painesville, Ohio; Portland
Columbia Div. of The Lodge & Shipley Co., Hamilton, Ohio
Columbia Rubber Mills, Portland, Ore
Ederer Engineering Co., Seattle
Greenlee Bros. Co., Rockford, Illinois
Mereen - Johnson Machine Co., Minneapolis
Reichhold Chemicals, Inc., New York City
Washington Iron Works, Seattle
Williams, White & Co., Moline and Chicago, Seattle

POWER BRAKES

Roberts Motor Co., Portland, Ore.

POWER PLANT BRICK WORK

F. E. Balden & Co., Portland

POWER SAWS

Homelite Corp., Port Chester, N. Y., Seattle, Wash.
Titan Saws, Inc., Seattle
Zidell Machinery & Supply Co., Portland, Ore.

PUMPS, AIR, HYDRAULIC

Ledeen Mfg Co., Los Angeles, Calif.

PUMPS, LOG WASH, ETC.

Cascade Machinery Co., Seattle

RADIO EQUIPMENT MANUFACTURERS

General Electric Company, Electronics Dept., Syracuse, N. Y.; San Francisco, Portland, Seattle

POWER PLANT EQUIPMENT

Turbines • Boilers • Diesels—Any Size

Write for Prices Giving Your Requirements

CHARLES WEAVER

19701 James Couzens Highway • BR 3-1901 • Detroit 35, Mich.

SEATTLE
3628 East Marginal Way
MAin 8629

NORTHWEST CHAINS & SPROCKETS INC.

PORTLAND
31 N. W. First Avenue
CA 8-3367

JEFFREY MFG. CO. • WHITNEY CHAIN CO.
FABCO FLEXIBLE COUPLINGS • AMERICAN PULLEY CO.
EBERHARDT-DENVER Speed Reducers

SPEE-D-TWIN STEAM FEED

helps the small and medium size sawmill to make a profit through GREATER PRODUCTION without increased expense.

Uses no more steam than belt or friction feeds. Less expensive to operate. Much faster. Full details in Catalog W. Yours for the asking.

SOULE STEAM FEED WORKS
MERIDIAN, MISSISSIPPI

By advertising in **THE LUMBERMAN** you are able to communicate with your customers and prospects in an atmosphere that is natural to them and most productive for you. In this respect, today's reliable business press serves a purpose not duplicated or equalled by any other selling force.

IDACO

CALIFORNIA HEADQUARTERS
for the
NEW
"NEWMAN"
M 512
Planer — Matcher
100% Ball Bearing
8 knife cylinders
feed speeds to 400 FPM
8" x 16"
all steel sprockets
heavy duty side heads
•
Immediate Delivery from Oakland
•
IDACO
Engineering & Equipment Co.
3200 Peralta St., Oakland, Calif.
Phone: OLympic 2-2400

THE MOST MODERN GANG SAW

Sweed

Highest Overrun and Accuracy in Cutting combined with high production

SEE and COMPARE Before You Buy

CHECK THESE FEATURES

1. Positive variable feed
2. No log or cant sorting
3. Feed speed up to 35 ft. per minute
4. American made for American Conditions
5. Prompt Availability of Repair Parts
6. Rugged all steel construction
7. Anti-friction Bearings throughout
8. Air operated Cylinders
9. Easy changing of Saws
10. Swinging gates
11. Simplicity for ease of maintenance
12. Electric or Diesel Power
13. Competitively priced
14. Easily installed
15. Accurate Balance: No vibration

$8,600 And Up

Use our experience to help you plan a modern layout to get maximum recovery.

Come and see us at Gold Hill. Will meet you at the Medford Airport.
(United Airlines, West Coast Airlines, Southwest Airlines)

Phone, Wire or Write for details or literature

NATIONAL MACHINERY SALES

NATIONAL DISTRIBUTORS

P. O. Box 518, Gold Hill, Oregon, Phone Ulrick 5-1145
Portland 22, Oregon, 5924 S. E. McNary Rd. Phone OLive 4-1906

PLEASE SEND DESCRIPTIVE PAMPHLET . . .

Name .....

Street, P. O. .....

City and State .....

Company Name .....

RAILWAY EQUIPMENT
C. M. Lovsted & Co., Inc., Seattle

REFUSE BURNERS
Archer Blower & Pipe Co., Portland, Oregon and Seattle
C & D Welding Co., Redding, Calif.
Phelps Bros., Inc., Eugene, Ore.
Rees Blowpipe Mfg. Co., San Francisco, Los Angeles
Seattle Boiler Works, Seattle

REPAIRING—SPRINGS
Benz Spring Co., Portland, Ore.

RUBBER SPECIALTIES
Columbia Rubber Mills, Portland
Gates Rubber Co., Denver, Colo.
Raybestos - Manhattan, Inc., Manhattan Rubber Div., Passaic, N. J.
Scougal Rubber Mfg. Co., Seattle

SAP STAIN PREVENTIVES
Chapman Chemical Co., Memphis, Tenn.: Portland, Ore.
E. I. DuPont de Nemours & Co., Inc. (Grasselli Chemical Dept.) Seattle, Portland,

SAP STAIN SPRAYING MACHINES
Keystone Machine Works, Roseburg, Ore

SAW FRICTION GUIDES
Champion Friction Co., Eugene, Ore.

SAWMILL ERECTION
Ward, M. A. Construction Co., Eugene, Ore.
Thompson & Holmberg, Inc., Portland, Ore.

SAWMILL MACHINERY
Albany Machine & Supply Co., Albany, Ore.
Armstrong Manufacturing Co., Portland
Bader & Carroll, Portland
Caldwell Machinery Co., Portland
Corley Mfg. Co., Portland, Chattanooga, Little Rock
Crown Machinery & Supply Co., Portland
Forest Products Machinery Co., Salem, Ore.
Frick Co., Waynesboro, Pa.
General Machinery Co., Portland
Goldstein & Bloch, Aberdeen, Wash.
Great Western Mfg. Co., Portland, Ore.
Irvington Machine Works, Portland
Johnson Engineering Works, I. W., Tacoma
Keystone Machine Works, Roseburg, Ore.
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machine & Locomotive Works, Klamath Falls
L-M Equipment Co., Portland
Mater Machine Works, Corvallis
McDonough Mfg. Co., Eau Claire, Wis.
Medford Machinery Co., Medford, Ore.
Mereen - Johnson Machine Co., Minneapolis
Mill Engineering and Supply Co., Seattle
Monarch Forge & Machine Wks., Portland
National Machinery Sales, Gold Hill, Ore.
Newman Machine Co., Greensboro, N. C.
Northwest Marine Iron Works, Portland
Peters Co., The, Portland
Portland Machinery Co., Portland
The Prescott Co., Menominee, Mich.
Prescott Iron Works, Inc., Portland
Prineville Machine & Supply Co., Prineville, Oregon
Salem Equipment & Supply Co., Salem, Ore.
Schurman Machine Wks., Woodland, Wash.
Soderhamn Machine Mfg. Co., Portland, Ore.
Soule Steam Feed Works, Meridian, Miss.
Star Machinery Co., Seattle, Spokane, Portland
Sumner Iron Works, Everett
Ward Construction Co., M. A., Eugene, Ore.
Western Steel & Supply Co., Dallas, Ore.
Wheland Co., The, Chattanooga, Tenn.; Portland
Zidell Machine & Supply Co., Portland

SAWS, KNIVES AND CUTTERHEADS
Atkins Saw Div., Seattle, Portland, San Francisco
Caldwell Machinery Co., Portland, Ore.
Henry Disston & Sons, Philadelphia, Pa.
R. Hoe & Co., Inc., New York, N. Y., Portland, Seattle, San Francisco
Jones & Orth Cutterhead Co., Seattle, San Francisco
Ohio Knife Company, Seattle, Portland, Oakland, Cincinnati
Pacific Saw & Knife Co., Portland
Simons Saw & Steel Co., Fitchburg, Mass.; Seattle, Portland, San Francisco
Spear & Jackson, Ltd., Vancouver, B. C.

SAWS, POND AND DECK

Kliever Machine Shop, Medford, Ore
L-M Equipment Co., Portland, Ore.
Northwest Marine Iron Wks., Portland Ore.

SAW SHARPENING MACHINERY

Armstrong Manufacturing Co., Portland
Corley Mfg. Co., Portland, Ore., Chattanooga, Tenn., Little Rock, Ark.
Hanchett Mfg. Co., Big Rapids, Mich., Portland

SHOVELS (See CRANES, also LOG LOADERS)
SIDE HEAD GRINDERS

Armstrong Mfg. Co., Portland

SPARK ARRESTERS AND ARRESTER CLOTH

American Sheet Metal Works, Portland

SPRINGS—LEAF & COIL

Benz Spring Co., Portland, Ore.

SPROCKETS

Chain Belt Co., Seattle, Portland, San Francisco
Link-Belt Co., Seattle, Portland, San Francisco

STEEL STRAPPING

Acme Steel Co., Chicago, Ill.; Los Angeles, San Francisco, Seattle, Portland, Vancouver, B. C.
Signode Steel Strapping Co., Spokane, Seattle, Portland, San Francisco and Los Angeles
United States Steel Co., Gerrard Steel Strapping Div., Chicago

TIRES AND RECAP

Firestone Tire & Rubber Co., Akron, Ohio
Goodrich Co., B. F. Akron
Goodyear Tire & Rubber Co., Akron

TORQUE CONVERTERS

Clark Equipment Co., Torcon Div., Battle Creek, Mich.
Gunderson Bros. Engineering, Portland, Oregon

TRACTORS, EQUIPMENT AND ACCESSORIES

Caterpillar Tractor Co., Peoria, Ill.; Seattle, San Leandro, San Francisco, Portland, Spokane
Howard-Cooper Corp., Portland, Seattle
Hyster Co., Portland
International Harvester Co., Chicago
Wood Tractor Co., Portland

TRUCKS, TRAILERS, ACCESSORIES

Autocar Trucks, Exton, Pa.
Ford Motor Co., Dearborn, Mich.
International Harvester Co., Chicago
Kenworth Motor Truck Corp., Seattle, Portland

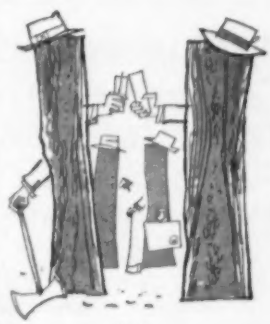
BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

Reduce your Steam or Air Leakage 100% by using
DAVIES FOUR IN LINE POPPET VALVES
Our 25th Year of Dependable Service
E. C. DAVIES
MANUFACTURER
Box 2335 • PORTLAND 14, OREGON
Phone: BE 6-6473 • Residence PR 1-0998

ARCHER BLOWER AND PIPE CO.
TWO PLANTS
9500 E. Marginal Way, Seattle 8, Wash., MOhawk 1945
6141 S. W. Macadam Ave., Portland 1, Ore., CApitol 7-3641
Since 1900 ARCHER BLOWER has been a leader in blower system design.

Los Angeles Headquarters for Lumbermen

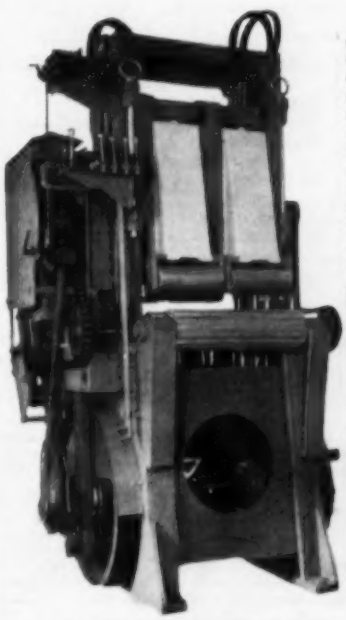


Enjoy the Mayfair Western Hotel's new pool, cabana, deluxe service and surroundings. Meet your friends from the Northwest. We're conveniently located at West 7th and Witmer—just one block off Wilshire.

FOR RESERVATIONS
phone: Western Hoteletype Service
Seattle MU 6161
Tacoma BR 2-2141
Portland CA 3-5053

The 28-Inch MARATHON Gang Mill

Efficient assembly line production makes Marathon the largest manufacturer of gang mills in North America, with resultant LOWEST COST.



28" MARATHON Gang Saw with Divided Rolls

Note These Features:
- Four Bottom Feed Rolls
- Assembled-Ready To Operate
- Trouble Free Mechanical Feed
- Feed Speed to 32 Feet Per Minute
- SKF Roller Bearing Main Shaft
- Divided Top Rolls for Cants
- Both Gates Swing
- Manufactured in The Northwest
- Strong Rugged Construction
- Low Height—No Vibration
- No Parts Problem
- Built To American Standards
- Prompt Delivery

The 28-Inch Series Cant Gang Mill
14" x 28" Opening
With divided top rolls, double bottom feed rolls (2 in and 2 out), variable feed works, 16 sets hangers, wedges and spacers. $13,750 FOB, Portland, Ore.

The 28-Inch Series Log or Cant Gang
28" x 28" Opening
With double-acting variable feed works, built-in anti-friction countershaft, lubricating system, 16 sets hangers, wedges and spacers. $13,250 FOB, Portland, Ore.

WRITE TODAY FOR DETAILS OF THIS MILL OR THE VERY POPULAR 20-INCH MARATHON

THE PORTLAND MACHINERY COMPANY
"When You Think of Machinery Think of Portland Machinery"
208 S. W. First Avenue • Portland, Oregon • Phone CApitol 8-9633

BUYERS GUIDE and CLASSIFIED SECTION

FEDERAL PIPE & TANK CO.

Wood Pipe
2 inches to 14 foot diameter.

Wood Tanks
100 gallons to 500,000 gallons capacity.

6851 East Marginal Way
RA. 0582 Seattle, Wash.

Mack Manufacturing Co., Long Island City, N. Y., Seattle, Wash.
Dodge Truck Division, Detroit
Parkersburg Rig & Reel Co., Los Angeles
Peterbilt Motors Co., Oakland
Reliance Trailer & Truck Co., San Francisco
Roberts Motor Co., Portland
Truck & Industrial Equipment Co., Portland
Warn Mfg. Co., Seattle
White Motor Co., Seattle, Portland, San Francisco
Willys Motor, Toledo, Ohio

TRUCK TRANSMISSIONS AND CONVERSIONS
Eaton Manufacturing Co., Cleveland, Ohio
Fuller Mfg. Co., Kalamazoo, Mich.
Roberts Motor Co., Portland
Timken-Detroit Axle Co., Detroit

TURBINES—Electric
Charles Weaver, Detroit, Mich.

VALVES—AIR & HYDRAULIC
Caldwell Machinery Co., Portland, Ore.
Davies, E. C., Portland
Ledeen Mfg. Co., Los Angeles, Calif.
John M. O'Brien Co., Portland, Ore.

VENEER TRAY EQUIPMENT
Western Machinery Corp., Portland, Ore.

WEED AND GRASS CONTROL
E. I. DuPont de Nemours & Co., Inc., CMU Division, Wilmington, Del
U.S. Borax and Chemical Co., Los Angeles

WELDING SUPPLIES
Industrial Air Products Co., Portland

WIRE ROPE
American Chain & Cable Co., Bridgeport, Conn.
Bethlehem Steel Co., San Francisco, Portland, Seattle
Brodecrik & Bascom Rope Co., Seattle, Portland, San Francisco, Los Angeles, Calif.
Edwards Company, E. H., San Francisco, Los Angeles, Portland, Seattle
Leschen Wire Rope Div., H. K. Porter Co., Inc., Seattle, Portland, San Francisco
Macwhyte Co., Kenosha, Wis.; Seattle, Portland, San Francisco, Los Angeles
Roebling's Sons Co., John A., Seattle, Portland
U. S. Steel Corp., Seattle, Fordham, San Francisco
Colorado Fuel & Iron Corp., Wickwire Spencer Steel Division . . . Denver, Seattle, Portland, San Francisco, New Orleans, Spokane

WORK and TUG BOATS
L. S. Baier and Associates, Portland, Ore.

WOOD PRESERVATIVES
Chapman Chemical Co., Memphis, Tenn.; Portland, Ore.
Du Pont, E. I. de Nemours & Co., Seattle, Portland, San Francisco

YARDER & SKIDDERS
Berger Engineering Co., Seattle
Skagit Steel & Iron Works, Sedro-Woolley, Wash.
Washington Iron Works, Seattle

SELECT USED MACHINERY

15" Stetson-Ross 6-12-A1 planer & matcher, double profile, all electric, 600 fpm
15" Stetson-Ross 6-10-A1 planer & matcher, double profile, electric
15" 77A American P&M, bolted, with feed table
15" Woods 415M P&M, elec., 10-knife, dbl. profile
54" Moreboo r. brg. resaw, late
#545 Greenlee 8" double end tenoner, electric, late
4" Yates C-88 h.d. moulder, DMD, ball brg.
6" Yates C-89 electric moulder
12" Y-A C-55 5-head electric moulder
12" Normanee h.b. moulder, h.d., 25 HP, starter, heads. Also one 8" size
12" Vonnegut all elec. moulder, heads, hoods
50 x 98" high frequency extra heavy duty edge glaer
8" x 32" Wicken gang saw
16" x 48" Diamond gang saw

LIQUIDATING

All Machinery and Equipment Formerly Used by Burke Millwork Company, Seattle
$205,000.00 Worth of Equipment for Manufacture of Sash, Doors, Frames, Mouldings, Cabinets, Precut or Prefabricated Buildings

Telephone or Write for Complete List
TYEE MACHINERY COMPANY
1924 First Avenue South Seattle 4, Washington MUtual 5881

PROFESSIONAL SERVICES

F. E. BALDEN COMPANY
Mechanical Contractors
122 S. W. First Ave.
Portland 4, Ore.
Phone: CApitol 8-5652

COLUMBIA PACIFIC CORPORATION
Consulting Engineers
SPECIALISTS IN: Machinery design, Sawmills, Barking & Chipping, Hardboard & Particle Board Plants.
2130 NW York
CA 3-8639 Portland 10, Oregon

K. B. Wood & Associates, Inc.
Forest Management
Timber and Development Appraisals
Logging Engineering and Surveying
Aerial Mapping
2633 N.W. Industrial St. Portland, Oregon
CApitol 6-2485-86

FOR SAWMILLS SEE
M. A. WARD CONSTRUCTION CO., INC.
391 E. Third Avenue. • Eugene, Oregon
Phone: 4-5531

INDUSTRIAL DEVELOPMENT CO.
3011 Chandler St. Tacoma 2, Wash.
DESIGNERS & CONSULTANTS FOR HARDBOARD, CHIP & FLAKE BOARD & OTHER WOOD UTILIZATION PLANTS
Development and "Mock-Up" Facilities
PHONE HAwthorne 4413 Dale L. Schubert Engineering

DESIGN ESTIMATES SUPERVISION CONSTRUCTION
THOMPSON & HOLMBERG INC.
Specializing in Wood Working Plants Sawmills, Veneer, Planing Mill, Wood Rooms, Barking and Chipping Installations
GUNNAR J. HOLMBERG Terminal Sales Bldg.
Phone CApitol 8-1965 Portland 5, Oregon

Our Facilities . . . Experience, and Services
ARE AVAILABLE TO YOU
KLAMATH IRON WORKS
P. O. Box 129 Klamath Falls, Ore.
Phone TU 4-7721

DEL COLLINSON
Registered Engineer
DESIGNS • ESTIMATES • REPORTS
Sawmills Planing Mills
Plywood Plants
11741 S. W. Boones Ferry Rd.
Phone: CHerry 6-2340 Oswego, Oregon

Blueprinting-Photocopies
Engineering-Drafting Supplies
Copyflex and Verifax Copying Machines
BRUNING
317 S. W. Third Ave. Portland 4, Ore.
CA 6-2344

Medford Machinery Company
Engineers & Contractors
Specializing in the design and construction of sawmills, plywood and veneer plants, power plants, barking, chipping and hardboard plants.
Specialists in Complete Utilization
Manufacturers of
FRYER DRYKILNS
1015 N. CENTRAL AVE. P.O. Box 266
MEDFORD, OREGON Phone 3-5261

HERBERT HESSLER
Forest Industries Consultant
SAWMILLS — PLYWOOD
WOODWORKING
Plant Modernization and Construction
Lumber Handling and Sorting Automation
Research and Process Development for Maximum Utilization
Route 2, Box 51 Newberg, Oregon
Telephone 3034

Headquarters for:

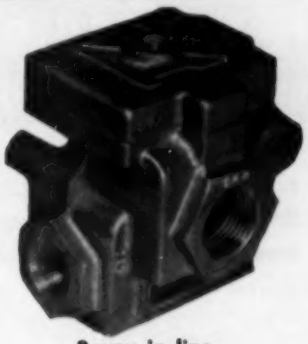
CYLINDERS & CONTROL VALVES AND ACCESSORIES

JOHN M. O'BRIEN COMPANY

7008 No. Interstate Ave.
Portland 17, Ore.
BUtler 5-4444

CYLINDERS — ATLAS HEAVY DUTY VALVES — (JIC approved) AUTOMATIC ROTEX PNEUTROL FILTERS, REGULATORS, LUBRICATORS, COMPRESSORS, etc.

WRITE FOR BULLETIN No. 306A



3-way in line Master Valve

Now! OUR 57th YEAR OF SERVING YOU . . .

EDGERS

Used 6" x 60" Salem late gang edger—Divided Rolls
New 6" x 54" Schurman—Latest Model
Used 6" x 60" L. N. Table Edger BB
Used 4" x 32" Wheland 3 saw BB table edger
Used 4" x 36" Newport BB table edger
Used 8" x 60" Allis LH roller brg. stub edger
Used 4" x 42" BB Newport stub edger
Used 6" x 42" Burton 4 gang stub edger
Used 12" x 84" Sumner edger
Used 6" x 30" Heaps stad edger
Used 4" x 32" American 3 saw stub edger
Used 4" x 30" Enterprise 3 saw table edger
Used 8" x 48" Evergreen BB dbbl. roll stub edger
Used 12" x 72" Sumner, split rolls—200 HP motor
Used 3 saw BB Vertical edger
Used 8" x 60" Greys Harbor anti-friction edger

HOGS AND CHIPPERS

New Diamond No. 25 hog
New Diamond No. 135 hog
New Diamond No. 145 hog
New Diamond No. 165 hog
Used No. 35 Diamond Hog
Used No. 38 Diamond Hog
Used No. 35 Puget Sound Hog
Used No. 40 Diamond Hog
Used No. 45 Diamond hog
Used No. 45 Puget Sound BB hog.
Used No. 35 Diamond Chipmill, roller bearing
New No. 145 Diamond Chipmill, roller bearing
New 48" Chipmaster for slabs, roller bearing
Used 66" Sumner Chipper—roller bearing
Used 64" Hesse-Ersted 4-knife BB Chipper
Used 72" 3-knife chipper—Bargain Price

PLANERS—MOULDERS—SURFACERS

Used #404x DM S.A. Woods 6" x 15" All electric 8-knife planer-matcher with profile
Used American No. 77 8-knife BB planer
Stetson Ross No. 4 16 x 30 Timber Sizer
Used Berlin No. 95 6x30 6-knife matcher with ripper
Newman No. 99 6 x 15 6-knife planer-matcher
New Marathon 4 x 13 BB planer-matcher
Used planer feed table
Used No. 100 Heaps 5" x 15" BB Pony Planer
4" x 4" Eaglefield electric moulder—frequency changer
Used 4" Smithway electric moulder
Used 490 Fay & Egan Surfacer
Used Normanoss 5 x 25 Surfacer
Used No. 969 Fay & Egan Shop type planer-matcher-surfacer—like new.
Used Bamford Premier 4" Electric moulder
Used No. CBR Yates-American Moulder
Used 8" x 36" Whitney single surfacer

RESAWS & RIP SAWS

Used 54" Marshon, anti-friction brg. tilt rolls
Used 54" Berlin resaw, screw set
Used 36" No. 2 Faye & Egan BB circular resaw
Used 42" J. A. Fay & Egan band rip saw
Used 42" Cordesman band resaw
Used 40" No. 4 Band scroll resaw
Used 4 H-6 Yates 72" horizontal band resaw
Used No. V-6 Yates 72" heavy duty band resaw
Used 84" Marshon resaw, sawmill type, quick set
American No. 2 self-feed circular rip saw
Used No. 0 American rip saw
American Circular Resaw

NEW AND USED PUMPS

New 6 x 4 x 6 Worthington Duplex boiler feed
Used Worthington 4" Centrifugal—1000 GPM
Underwriter approved Firepumps—many sizes
Boiler water feed pumps—New & Used
Used 5" x 6" Fairbanks Centrifugal pump—500 GPM
Used 12" x 12" Westinghouse Centrifugal pump — 3000 GPM
Used 8" Jeansville 2 stage Centrifugal pump—2000 GPM

COMPRESSORS

33 cu. ft. New Worthington air cooled
43 cu. ft New Worthington air cooled
65 cu. ft. New Worthington air cooled
122 cu. ft. Used Worthington air cooled
194 cu. ft. New Worthington air cooled
198 cu. ft. Used Sullivan air cooled
311 cu. ft. Used Ingersoll Rand water cooled
324 cu. ft. Used Ingersoll Rand water cooled
465 cu. ft. New Worthington water cooled
500 cu. ft. Used Worthington water cooled
500 cu. ft Used Ingersoll Rand water cooled
750 cu. ft. Used Chicago pneumatic water cooled

HOISTS AND CRANES

Used single drum 6" x 15" spool
Used 5 ton Hesse Ersted single drum hoist—like new
Used American dbl. drum 24 x 24, 40 HP
New Budgit hoists in stocks
2 ton and 5 ton hand winches in stock

SHOP TOOLS

Used Oster pipe & bolt threader
Radial drill
American radial drill
8 x 16 Racine hydraulic back saw
Kempsmith geared Maximatter
10 x 36 quick change lathe

MISCELLANEOUS

Used Stetson Ross 54" swing saw—BB
Used Hesse-Ersted 6 HP motorized saw arbor
American Columbia 48" oscillating 3 drum sander
Used Irvington 60" arm swing saw
Berlin 30" 3 drum sander
Used Morgan Box board matcher
Marson Johnson 20' precision trim & printer
36" Crescent ball bearing band saw
Used Yates 36"—3 drum sander

FEED WORKS

New Gardner Hydraulic Shotgun Feed—on order
Used Wheland 5" belt feed
Used 5 x 6 SpeeDee Twin feed
Used 16 x 18 Allis steam twin feed, self-contained
Used 3" hydraulic shotgun

LOG AND CANT GANGS

Used 28" Wehrkahn Log Gang, air carriage
Used 28" Sunbo log gang, air carriage
Used 34" Mill Engineering log gang, air carriage
Used 48" Wicks cant gang
Used 20" Marathon cant gang, like new
New 20" Marathon cant gang
New 20" Marathon for logs or cants
New 28" Marathon No. 300 for logs and cants
New 28" Marathon No. 400 divided roll cant gang
New 28" Linck gang saw

FILING ROOM EQUIPMENT

New Armstrong No. 4 Stretcher Roll
New Armstrong No. 4 Band Saw Grinder
New Armstrong No. 54 Circular Saw Gummer
Used Armstrong No. 6 Band Saw Grinder
Used Armstrong No. 16 Circular Saw Grinder
New Marathon Fang Saw Grinder
Used Covel No. 140 automatic Band Saw Grinder
Used Covel No. 83 24" Gang Saw Grinder
Used Covel No. 217 BH Band Saw Grinder
Used Covel No. 90 LH Band Saw Grinder
Used Covel No. 150 BH Band Saw Grinder
Used Covel No. 109 Stretcher Roll 16" capacity
Used Hanchett No. 250 LH Band Saw Grinder
Used Hanchett No. 948 Circular Saw Grinder
Used Hanchett No. 724 36" auto. circular Saw Grinder
Used 12" Welding Clamp

KNIFE GRINDERS

Used 36" Fay & Egan No. 253 automatic knife grinder
Used American 30" knife grinder
Used American 32" straight wheel knife grinder
New Dependable No. 99A5 36" motor drive, automatic knife grinder
New Dependable No. 101A sidehead grinder
New Defiance 38" motorized automatic knife grinder
Used Dependable 101A side head grinder
Used Berlin 275—36" Automatic knife grinder
Used Dependable 36" knife grinder, cup wheel
Used Hanchett 36" knife grinder, cup wheel

MILL EQUIPMENT

Used BaGo Hydraulic log turner
Used Cornith 1 man, 2 saw trimmer, 8' to 20'
New Wheland 1 man 2 saw trimmer, electronically controlled
Used 2-arm Log Stop & Loader, 36" arm, 12 x 16 cyl.
Used 3-arm Log Stop & Loader, 42" arm, 16 x 20 cyl.
Used 20' Portland Iron Log Turner
4—Used Gerlinger Carriers 42"
New Willamette Iron Sawmill, Swede
Steel Deck with flippers
Used 10" x 12" full oscillating Nigger
Used 6" x 8" full oscillating Nigger for air
Used 40" x 40" Sawmill Burner—Bolted Sections

HEAD RIGS AND CARRIAGES

Used 6' Union Iron Works band mill
Used 54' Allis Chalmers Band Headrig—anti-friction
6' Yates band mill, all cast, LH
Used 8' McDonough bandmill
Used Monarch 3-block carriage, Andrus set
Used 16', 3-block 56" opening steel carriage
Used 18' Monarch 3-block 54" opening steel carriage
Used 14' International 3-block 52" opening steel carriage
Used 18' fabricated 3-block 60" opening steel carriage
Used 8' fabricated 3-block 32" opening steel carriage

LARGE MOTORS

Used 300 HP, 1200 RPM SB Fairbanks Morse
Used 300 HP, 600 RPM GE Slip Ring & Control
Used 250 HP, 600 RPM, West. Slip Ring & Control
Used 200 HP, 1200 RPM SB General Electric
Used 200 HP, 720 RPM SB General Electric
Used 150 HP, 720 RPM SB General Electric
Used 150 HP, 720 RPM SB Westinghouse
New 150 HP, 1200 RPM BB Allis-Chalmers
Used 100 HP, 1800 RPM BB Westinghouse
New 100 HP, 1200 RPM BB Allis-Chalmers
Used 100 HP, 1200 RPM SB Allis-Chalmers
Used 100 HP, 900 RPM SB General Electric
Used 100 HP, 900 RPM SB Fairbanks Morse
Used 100 HP, 720 RPM SB General Electric
Used 75 HP, 1800 RPM SB General Electric
Used 75 HP, 1200 RPM SB Allis-Chalmers
Used 75 HP, 1200 RPM SB Allis-Chalmers
Used 75 HP, 1200 RPM SB General Electric
Used 75 HP, 720 RPM SB Allis-Chalmers
Used 75 HP, 720 RPM, SB General Electric
PLUS MANY, MANY MORE

Agents for DIAMAOND IRON WORKS—Foot Hoes and Chipmills. GARDNER—Hydraulic Carriage Feed & Log Deck. SCHURMAN MACHINE WORKS — Edgers, Resaw. WORTHINGTON CORPORATION—Compressors and Pumps. WHELAND COMPANY—Band Mills, Circular Sawmills, Edgers, Trimmers, Carriages. IRVINGTON—Trim Saws. ARMSTRONG MFG.—Filing Room Equipment. DEPENDABLE—Knife Grinding Equipment and Moulders. ALLIS-CHALMERS MFG.—Motors, Controls, Drives. COMET—Radial Arm Saws. DAVIS & WELLS—Woodworking Machinery. BEGE — Hydraulic Log Turners. P&H—Resaw. BINKS MFG. — Spray Equipment. MARATHON—AND LINCK GANG MILLS. DELTA—Power Tools.

THE PORTLAND MACHINERY COMPANY

"When You Think of Machinery, Think of Portland Machinery"

208 S. W. First Avenue — Portland, 4, Oregon — Phone CApitol 8-9633

BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

SITUATION WANTED

Sawmill Superintendent with excellent production record desires job with reliable company—pine or fir. Thirty years experience. Write TL Box 184, c/o THE LUMBERMAN, 519 S.W. Park Avenue, Portland 5, Oregon.

EXPERIENCED LUMBERMAN SEEKS supervising opportunity in lumber manufacture. Thorough working knowledge of production, sales, costs in big mill operations. Hold B.S. degree Forest Products. Write TL Box 165, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

POSITION WANTED

Ass't. Mgr. or Office Mgr. Good on cost reduction. 15 yrs. administration experience (Accounting and Sales to Maint. and Production) with lumber, logging and plywood concerns. Trained by major company under top men. Age 45. Write TL Box 175, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

SUPERINTENDENT AVAILABLE

Reliable and Ambitious. 25 years experience in the lumber industry. Presently employed and for past ten years, as superintendent and plant manager. Seeking any stable position with opportunity to progress. Have operated mills of 40 to 140M. Have thorough knowledge of logs and logging. 42 years of age, married with family. Excellent references available. Write TL Box 183, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

EXPERIENCED LUMBERMAN with twenty-five years experience wishes employment as plant superintendent, yard foreman, or dry kiln operator. References. Write TL Box 176, c/o THE LUMBERMAN, 519 S.W. Park Avenue, Portland 5, Oregon.

DESIRE CHANGE

Sawmill Superintendent or Foreman, 17 years experience, pine-fir-spruce, Inland and West Coast. Know grades-millwrighting-production-maintenance-bands-gangs-resaws-circle saws. Best of references, presently employed. Write TL Box 172, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

ACCOUNTANT — twelve years experience Lumber Mfg. 100M capacity, logging & plywood. Capable supervising office. Operating-financial statements. Executive background. Write TL Box 180, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

Saw Mill Superintendent or manager, 33 years experience, desires job with reliable company. Can give very best of references. Pine or fir. Will go anywhere. Sam L. Smith, 1585 Buttermilk Lane, Arcata, California. Phone: Van Dyke 21-380.

POSITION OPEN

Excellent position open for energetic, experienced production man... 35/45 age bracket. Must be thoroughly familiar with logging and sawmill production problems, such as handling labor, USFS relations, and capable of managing Ponderosa Pine operation located in the Southwest. 40 million feet yearly production. Good background of business ability requested. State past experience and give personal history. Write TL Box 181, c/o The Lumberman, 519 S. W. Park Ave., Portland 5, Oregon.

CHIEF ENGINEER

GRADUATE MECHANICAL ENGINEER for large integrated Sawmill located in the South. Experience should include supervision in construction and maintenance, and planning for expansion and modernization. Pay commensurate with experience. Replies will be kept strictly confidential and should include age, education, experience, etc. in resume form. Write TL Box 171, c/o THE LUMBERMAN, 519 S. W. Park Ave., Portland 5, Oregon.

WANTED, LUMBER SALESMAN

West Coast Wholesaler wants aggressive man, preferably possessing previous wholesale or commission experience. Prefer working on basis of salary plus commission with ultimate aim of setting up Eastern wholesale office. Write TL Box 168, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

WANTED

Foreman to supervise manufacture of doors and plywood for Southern plant. Experience in handling one or more departments, including Kiln Drying, Rough Mill, Press, Sanding, Shipping. Reply, giving age, experience and when available Write TL Box 154, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

LUMBERMAN WANTED

Eastern firm seeking experienced individual capable of advising in the establishing and operation of a sawmill and Mill works.

Applicants should be thoroughly experienced in product evaluation and marketing as well as manufacturing.

Send complete resume of experience and salary requirements to

TL Box 178

THE LUMBERMAN

519 S.W. Park Avenue Portland 5, Oregon

WANTED

Experienced Wholesale Sales Manager to handle primarily California Redwood on the East Coast. Should have a following in the trade. Unlimited opportunity. Right person can choose own staff. State full experience. Replies held in confidence. Write TL Box 182, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

WANTED

Logging Engineer for Northern California operation. Must have experience in Tractor and Hi-lead Logging, Road Location and Construction and Timber Cruising. College Graduate preferred. Address replies c/o THE LUMBERMAN, TL Box 185, 519 S. W. Park Avenue, Portland 5, Oregon.

WANTED

Manager for Sawmill & Planer operation. Fir with little Spruce. Must have record as successful operator. Initiative, imagination and integrity important. Excellent opportunity for qualified man. Submit qualifications to TL Box 177, c/o THE LUMBERMAN, 519 S. W. Alder St., Portland 5, Oregon.

Need financing for a Sitka Spruce mill in **Alaska.** Mill is about ¾ complete. Have 5 million feet of timber available now. Timber estimate for the area is 150 million. For full information, write Timber, Inc., Box 1954, Anchorage, Alaska.

SALE OF TIMBER
FLATHEAD INDIAN RESERVATION

Sealed bids, in duplicate, on forms provided therefor, marked outside, "Bid, Bassoo Logging Unit", addressed to the Superintendent, Flathead Indian Agency, Dixon, Montana, will be received until 2:00 P.M., Mountain Standard Time, July 29, 1957, for the purchase of timber on a tract within the Flathead Indian Reservation described as the "Bassoo Logging Unit". The unit includes approximately 5,073 acres of timberlands with a total estimated stand to be cut of 23,129 M. feet B. M. of ponderosa pine and 6,159 M. ft. B. M. of Douglas fir, larch and other species, more or less, which estimates are not guaranteed. Under a selection system of logging, it is planned to cut approximately 47% of the merchantable volume of ponderosa pine and approximately 75% of the associated species. About 440,000 feet, B. M. of the total volume stands on approximately 80 acres of allotted land for which a separate approved contract must afterward be made with the owners if they desire to sell and on terms similar to the contract for the unallotted timber. Each bidder must state the price per thousand feet, B. M., Scribner Decimal C Log Scale that will be paid for the timber cut and scaled prior to any readjustment of rates as specified in the contract. No bid will be considered for less than $31.75 per thousand feet B. M. for ponderosa pine and $12.50 per thousand feet B. M. for Douglas fir, larch, and other species. A certified check for twenty-four thousand dollars ($24,000.00) on a solvent bank, payable to the Bureau of Indian Affairs, must accompany each sealed bid. Persons bidding for or on behalf of companies, corporations, or partnerships, must at the time of bidding submit in writing conclusive evidence of their authority to do so. The deposit will be returned to the unsuccessful bidders. The deposit of the successful bidder will be applied as part of the purchase price against timber cut on this unit only, or retained as liquidated damages if the bidder shall not execute the contract and furnish satisfactory bond for forty-thousand dollars, ($40,000.00), within sixty (60) days from acceptance of his bid. The right to waive technical defects and to reject any and all bids is reserved. A member of the Flathead Tribe who is a bona-fide timber operator and has submitted an acceptable bid in response to this advertisement shall have the right to submit a substitute written bid equal to a higher acceptable bid submitted by a non-member of said Tribe, provided that said substitute written bid is submitted before 5:00 P.M. the day the bids are opened; provided further, that, if two or more members make preferential bids, the award of the contract may be made by lot. The contract will specify that all designated timber shall be cut and paid for prior to April 1, 1962. Advance payments will be required on the individual allotment contract as stipulated in the contract covering the entire unit. The first advance payment must be made within thirty days of approval of the individual allotment contract. Before bids are submitted, full information concerning the timber, the conditions of sale, and the submission of bids, should be obtained from the Superintendent, Flathead Indian Agency, Dixon, Montana, or the Area Director, Bureau of Indian Affairs, 804 North 29th Street, Billings, Montana. Dated this May 27, 1957, at Washington, D.C. Glenn L. Emmons, Commissioner, Bureau of Indian Affairs.

FOR SALE

Equipment for two modern overhead fan Moore Cross-Circulation double track kilns 104 feet long originally installed 1955 and designed for drying fir and pine lumber. Write TL Box 179, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

CHIPPER

Sumner 66", 5 years old, less motor. Excellent condition.

Michigan-California Lumber Company

Camino, California

FOR SALE

In Northern California because of disagreement between partners. Diesel electric sawmill cutting between 45 & 50 thousand per shift, with 20 to 30 million feet private timber, more private and Forest Service timber available. Write TL Box 173, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

FOR SALE
COMPLETE LUMBER BUSINESS

Vicinity of Missoula, Montana. Remote control electric sawmill, logging outfit, and complete planing and sales yard. Ample timber on hand—unlimited supply near-by. Terms considered—29% down. Write to TL Box 174, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

FOR SALE

Complete lumber set up consisting of two mills, resaws and gang mill, dry kilns, modern planer, yards and sheds, logging equipment, etc. Year around operation with plenty of available timber. Production in excess of 100M daily. Located on main highway and railroad. Write TL Box 161, c/o THE LUMBERMAN, 519 S. W. Park Avenue, Portland 5, Oregon.

—TO SETTLE ESTATE—

Large inventory new caterpillar parts: Lorain shovel parts; D-8 Cat; Allis Chalmers Tractor; 1949 K-12 Truck; LBSHC Shovel; Quickway Shovel & Miscellaneous.

Write P.O. Box 710, Roseburg, Oregon for detailed list.

TIMBER & RANCH

3900 Acres

2 Sets of Buildings

Registered Polled Herefords

$390,000.00

HAPPY HILLS RANCH

Cazadero, California

1 NEW LODGE & SHIPLEY HOT PRESS

Used less than 6 months. Model 54106—20W21 Hot plate press. Drill construction for steam . . . 54 x 106 x 1¾" . . . 21 Platens.

WILL SELL BELOW COST

DOERNBECHER PROPERTIES, INC.

3200 N.W. Yeon Ave. PORTLAND, OREGON CA 2-9231

FOR SALE—MILL LIQUIDATION

1—Newman 512 8x16, 8 knife planer & matcher
1—2 saw Salem stud mill, complete
1—Salem 6x42 gang edger, power feed
(above items used only one season)
2—Michigan 175A diesel 4-wheel tractor shovels with log forks
1—Salem 66" L. H. vertical line bar resaw with saws
Miscellaneous gearheads and electric motors to 150 HP

Intermountain Lumber Company

Sawmill Department
MISSOULA, MONTANA

Box 1443 **Phone 9-2341**

FOR SALE

NEW SKAGIT SJ4 MOBILE LOGGER with 170 H.P. Ford Engine, torque converter drive and two speed air shift transmission on drum. Standard equipment.
Reg. Price $38,150.00 **Sale Price $29,150.00**

NEW SKAGIT SJ4RT MOBILE LOGGER with 170 H.P. Ford Engine, torque converter drive and two speed air shift transmission, powered guy lines, power steering, 230' ½" topping line.
Reg. Price $41,730.00 **Sale Price $35,000.00**

NEW SKAGIT SJ6 MOBILE LOGGER with Caterpillar D326 Engine, torque converter drive, standard equipment.
Reg. Price $74,345.00 **Sale Price $65,000.00**

NEW SKAGIT BU15 FMH HOIST with Ford "239" Industrial Engine, main and haulback drums, banked lever controls. There are two of these units available.
Reg. Price $4,300.00 **Sale Price $3,800.00**

USED SKAGIT B20 FMHS HOIST, Skid mounted with rigging. **Price $2,150.00**

USED SKAGIT BU30 FMHS HOIST, mounted on pneumatic tired trailer, equipped with lines and blocks. **Price $2,750.00**

USED SKAGIT BU40 HOIST, skid mounted with blocks and rigging. **Price $2,150.00**

USED SKAGIT BU50 MHS HOIST, Main, haulback and straw drums. Sled mounted with canopy. **Price $3,750.00**

USED BERGER HOIST, equipped with Ford Industrial Engine on pneumatic tired trailer, with lines and blocks. **Price $2,450.00**

USED WILLAMETTE HOIST, double drum, Dodge Engine with fluid coupling. **Price $1,750.00**

Call Wire Write
BERGLUND TRACTOR & EQUIPMENT CO.
Napa BA 6-2066 Santa Rosa 8440 Willits GL 9-5575

FOR SALE

1—8 ft. Allis Chalmers RH Bandmill w/motor & starting equipment

1—Carriage & setworks 67" Monarch, 4 block w/twin engine drive

1—14 x 16 twin engine

1—14 x 72 Allis Pacific Edger w/motor & starting equipment

1—log well hoist complete

1—log loader 28 ft. complete w/niggers, arms, cylinders

1—planer, 8x15 double profile S-R complete, motorized

1—S-R No. 272 combination jointer & head grinder

2—Blower systems 6 ft. & 48" fan complete w/motor & starting equipment

1—6 ft. Mershon LH Resaw

2—Cutoff saws 44" & 38"

1—Steam plant, 3 boiler complete equipment

1—CME Norman 50" chipper

1—shaper 20" Cincinnati

1—trip hammer

1—Forge w/blower & accessories

1—300 amp G. E. Welder

1—Champion 20" floor model drill press

1—50 Ton hydraulic press

For Complete Information, Call Mayfair 3-2351, TWX 80, or Write Purchasing Agent.

WILLAMETTE VALLEY LUMBER CO. **DALLAS, OREGON**

Planer Special

Yates-American A-62 10 Knife, 6" x 15," latest type with 150 HP motor, heads, belts, feed table, 150 HP blower system, offbearing belt and sprayer. Also included are all starters and switches of latest type. A real buy.

New 36" Super Mill Engineering cant gang with automatic overhang.

Allis-Chalmers 10 ft. LH Type C roller bearing bandmill with saws, grinders, 400 HP Allis-Chal. 3 brg. motor, starter, and belt. New top wheel. Price for all, $9500.

Allis-Chalmers turbine generators, one 2000 KW-2300 V, and one 750 KW-440 V. Both complete.

Crown Machinery & Supply Co.

FRED G. SWENSSON THOS. I. HALEY
1805 N. W. Thurman St.
Portland 9, Ore. Phone: CA 7-0606

CHECK THESE REAL BUYS NOW!

EVERY ONE MEANS TOP VALUE FOR YOU

PLANING MILL MACHINERY

#407 Woods Matcher — 6" x 15" — 12 knife —100 HP Top Head, 40 HP Bottom Head, 50 HP Outside Head, 30 HP Inside Head with 40 HP feed motor. Machine complete with 1-1 double pineapple feed table, electrical panel (440-60-3), good assortment of side heads and spare parts. Machine in excellent condition.
1 Hanchett knife grinder GK-38" 3 yrs. old, like new.
1 S.A. Woods #329M setting stand.
1 S.A. Woods #327M sidehead grinder.
16 New Diesteel 12"x2"x5/32" planer knives.

Several all steel transfer tables and lumber belt conveyors including one "sloping top" lumber grading table.
Double Arm Portable Hydraulic Scissor Lifts — 6000# capacity, 30" travel, 3'x10' sheet steel dock platform —American Manufacturing Co.
American Manufacturing Co. Hydraulic Single Stabilized Platform Elevator—Type HPS-800. Unit furnished with 12½" piston dia. ram having 42" travel. Platform 16' long. 2"x5 HP rotary pump to deliver 45 FPM at 120# pressure.
American Manufacturing Co. Single Stabilized Accumulating Elevator—Type HPS-800. Unit consists of 14" piston dia. ram having 4' total travel with rack and pinion stabilizer. 2"x5 HP rotary pump 54 GPM at 130#.

MOTORS (440-60-3)

25 HP 2 Speed 1800 RPM 900 RPM
10 HP 1750 RPM
10 HP 1165 RPM
5 HP Slip Ring 1690 RPM
5 HP 3600 RPM New
A few good reduction gears are still available.

WIRE AND CONDUIT

All Sizes Electrical Wire and Conduit with few miscellaneous switches and controls—Real Buys.

SAWMILL BLDGS. & EQUIP.

Heavy All Steel Sawmill Frame Bldgs. — Headrig side 42' wide x 190' long, 18' to saw floor 12'10" to bottom cord of roof trusses. Pony rig side 60' wide x 100' long, 16' to saw floor then 14'10" to bottom cord of roof trusses. Filing room 50'x60' ground floor. Mill frame can be readily adapted for different widths and lengths.
#1 Section Main Roll Case—15-10" rolls 42" wide x 44'6" long with Cant Lowering Arms—10" air cylinder, 3 arms.
#2 Section Main Roll Case—15-10" rolls 42" wide x 50' long.
4 7-Tooth drive sprockets, Esco manganese inserted teeth, 4-15/16 shafting Esco casting #E9861. Bearings for above sprockets, 4-15/16 bore Esco cast steel bearings with bronze liner.
Several 30" Dia. x24" face idler drums for 1½"x6 chain, 3-7/16 shafting Esco Patt. #84107. Esco cast steel bearings for above, bronze liner 3-7/16 bore.
Roller and Malleable Chains, Sprockets, Anti-Friction Bearings, Air Cylinders, Transfer and Lift Skids.

UNDERWRITER'S FIRE PUMPS

1 3-Stage 14" FM 6920F turbine bowl pump with impellers #1203 and 125HP 1760 RPM G.E. type VHS motor with Cuttler Hammer 120300 combined manual and automatic across line, Underwriter's fire pump control with 2700 amp. circuit breaker.
1 3-Stage 14" FM #6920F turbine bowl pump with FM-4 right angle gear 1.1 ratio and Watson Spicer W151 flexible shaft 48" long, with 1-W51 special large flange and 3" Fisher type 57-57 fire system pump governor. Pump drive a G.E. steam turbine 125 HP 150" steam.

SAWDUST PUMP — 5" Fairbanks Morse.

10 HP (440-60-3) 12" T5CIAG Impeller.

CONVEYOR PULLEYS

12" Dia. x 26" Face
12" " x 14" "
12" " x 18" "
18" " x 18" "
24" " x 18" "

BELTING

Balata Conveyor Belts, new and used: 14", 16", 18", and 24".

SMOOTH END TRIMMER

Used Smooth End Trimmer Guaranteed to be as good as new—Heavy all steel construction—Saw spacings zero, 8', 10', 12', 14', 16', 18', and 20'. Can pass 28' stock over table. Individual 5 HP Saw Arbor Motors. "No Bounce" Hold Down Shoes and the Best Dust Collecting Hood System ever. This is a real heavy duty machine that should be inspected and compared to the newest and latest.

3 Resaw Blades 24'6"x7"x18 ga. 1¾" SP Left hand used.
4 Resaw Blades 24'6"x7"x19 ga. 1¾" SP Left hand New.
4 Resaw Blades 24'6"x7"x18 ga. 1¾" SP Left hand New.
12 Disston circular hollow ground style P smooth trim saws, 20"x7"x11x7 ga. x 150 tooth x 1⅛" eye, 7" collar.
1 10" wide x 4' long x 5" thick hand saw anvil.
1 10" wide x 3' long x 3" thick hand saw anvil.
2 Sets welding gauge & 1 Set Welding tips.
1 Hand Swage #8 Armstrong.
1 Hand Swage #5 Armstrong.
1 Hanchett #948 automatic circular saw sharpener with electric motor drive.
1 Blackman belt drive Grinder to sharpen edger saws.

PIPE AND VALVES

Save money on good used Pipe & Valves (wonderful assortment)—Particularly Rising Stem CI Gate Valves in all sizes thru 12"—also good supply Underwriter Approved Post Indicator Valves for Sprinkling Systems. Fire Hydrants—Underwriter's 4". Check our stocks of Used Steel I Beams, Angles, etc. Typical of our stock—We have 36 only ¾" #106A Jenkins Globe valves and 1000' of 10" Black Pipe.

KILN TRUCKS

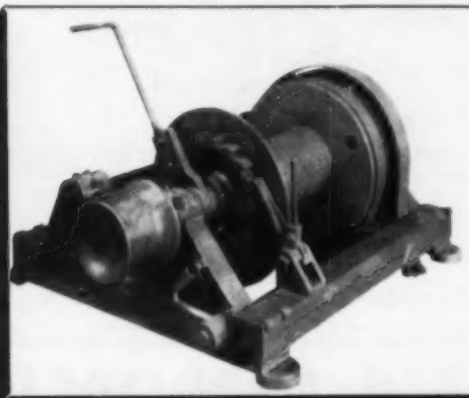
50 Moore Dry Kiln kiln trucks.

Have you checked our stocks of new and used steel?

FISCHER-MARCOLA CO.

P. O. Box 469, Eugene, Ore.

Call Bud Keeney, RI 6-1641
or Dale Fischer, DI 5-8533



"Western" Cable Drum Winch

"Model "M" illustrated

DOUBLE DRUM OR SINGLE DRUM

"Made in the West for Westerners"

RUGGED — COMPACT — SELF CONTAINED
EASIER OPERATION — LESS MAINTENANCE
LESS WEAR

Write or Phone for Details

WESTERN MACHINERY CORP'N.
1035 S. E. 9th, Portland 14, Ore.
Phone: BE-6-4117

USED Circular Saws

Slashers - Trimmer & Head Saws, etc.

PACIFIC SAW & KNIFE CO.
912 S.E. Stark Belmont 4-5463
Portland, Ore.

AUTOMATIC HOOKS

HANDLE LOGS, LUMBER
PULPWOOD, TRUCK TRAILERS,
Pipe, concrete hoppers, and steel.

MAR HOOK & EQUIP., INC.
BOX 342, ABERDEEN, WASH. Phone 3998

EQUIPMENT FOR SALE

PLANERS, MOULDERS, SURFACERS
1—Newman 12" all electric Moulder, 4 head
1—77A American 6 x 15 ten knife ball bearing planer
1—Woods 4048 6 x 15 8-knife planer
1—American #112 Surfacer 24"
1—S. A. Woods #131 8" Moulder

CARRIERS & LIFT TRUCKS
1—Ross 19MT Lift Truck, 10' lift, 6000 lb. capacity, reconditioned
1—Ross 70-6045 Carrier, reconditioned
1—Ross Series 91-7956 Carrier, 52 x 67 package

MISCELLANEOUS
1—Mershon 54" vertical resaw
1—American 54" vertical resaw
2—Motorized Twin Resaws
2—Irvington Hill Cut-off Saws
1—Klamath 6 ft. R.H. Band Mill, ball bearing
1—16 ft. carriage 3 block 48" opening, roller bearing
1—All steel carriage 44" head block, three block, predetermined electric set.
1—No. 45 Ball Bearing Diamond Hog
1—Steel Circular saw husk 54" saw

GOOD SELECTION OF USED INDUCTION AND GEAR MOTORS

NEW EQUIPMENT
New General Machinery Company 8" and 6" Roll Feed tables in stock
New General Machinery Company Circular Rip Saw, motorized, ball bearing, in stock.
New General Machinery Company Knife Balancing Scales in stock

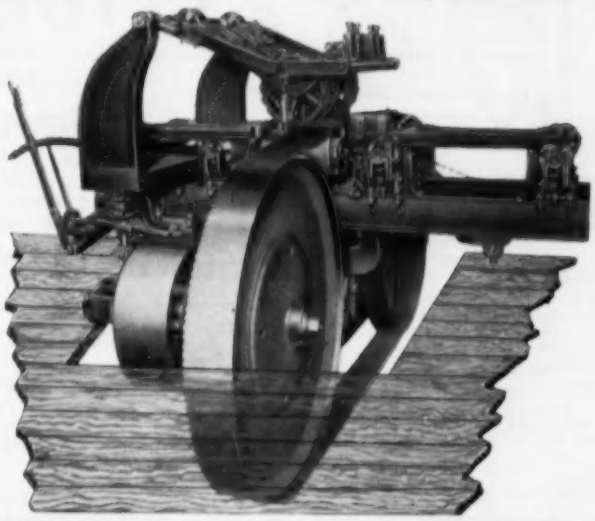
We maintain a strictly first class machine shop, manned with experienced woodworking machinery men and millwrights, for making and rebuilding planing mill and sawmill machinery. We also furnish parts and gears for all makes of machines.

Distributors for Yates-American Machinery Company Products in Eastern Washington, Eastern Oregon, Montana, Idaho, N. & S. Dakotas.

All Used Equipment Subject to Prior Sale.

GENERAL MACHINERY COMPANY
8900 S. E. 72nd Avenue
Portland, Oregon
Phone—Prospect 4-2636
or
BADER MACHINERY COMPANY
E. 1311 Sprague Avenue
Spokane, Washington
Phone—Keystone 4-8002

FOR SALE at a bargain price



NEW 6-FOOT HORIZONTAL BAND RESAW

This well known machine, popular with many sawmill operators throughout United States and Canada, is in stock available for immediate delivery. Check its outstanding features listed below:

HAND: Right hand only.

WEIGHT: Approx. 18,000 lbs.

HEIGHT: 4 ft. 6 in.

FLOOR SPACE: 17 ft. wide x 11 ft. 6 in. long.

SAW BLADES: Longest length 39 ft. 10 in.—Shortest length 38 ft. Width 10 in.—16-gauge saw—Tooth spacing 1¾ in.

SETWORKS: Lever setworks operated by power.

SAW GUIDES: Roller guides or crowding rolls.

SAW WHEELS: 6 ft. diameter with weldless steel rims.

FEED ROLLS: Top rolls sectional, 9 in. diam. x 4½ in. face—Bottom rolls solid, 8 in. diam. x 36 in. long.

STRAINING DEVICE: Knife edge.

RATES OF FEED: 110 ft. to 220 ft. per minute.

CAPACITY: 100 M ft. per 8 hrs. Center saw stock from 1 to 8 in. thick.

MAXIMUM HORSE POWER: 125.

Phone, wire or write us today.

KOEHRING-WATEROUS LTD., Brantford, Ontario, Canada
Please send price information on 6 ft. Horizontal Band Resaw

NAME ..... TITLE .....
COMPANY .....
STREET .....
CITY, STATE KW92L

Linn GEAR COMPANY

Phone Alpine 8-6454
Rt. 2, Box 20E
Lebanon, Oregon

MANUFACTURING ROLLER CHAIN SPROCKETS - SPUR GEARS

HIGHEST QUALITY STEEL SPROCKETS & GEARS

LOOK FOR THE NAME — *Then You Know It's The Best*

? TRYING TO CUT DOWN ON COSTS ?

Don't Do It with MIRRORS!

Wire — Phone — Write

CLYDE P. CARROLL

MACHINERY CO.,
FOR NEW AND USED

Sawmill and Planing Mill Equipment

HEAD RIGS
1 6' Yates-American anti-friction bearing, L.H.
1 9' Allis babbit bearing band mill
1 9' Allis roller bearing band mill
1 9' Filer & Stowell babbitt bearing band mill
Steel circular husks with top and bottom ball bearing arbors, chipper arbors complete with saws and belts. Several spare circular saw arbors, various sizes.

CARRIAGES
1 Monarch 4-block, steel frame, 66" opening, air dogs, electric taper attach., electric set-works
1 3-block, 72" opening, screw type electric set, steel frame
1 4-block, 60" opening, screw type. Johnson No. 5 electric set, timber frame
1 3-block, 42" opening, roller chain type, Electrozet setworks, timber frame.
44" rack and pinion blocks
48" rack and pinion blocks
48" screw blocks
72" screw blocks
Allis No. 3 electric drive
Allis No. 4 electric drive
Andrus electric drive with column and dial
Andrus setworks light pattern for gas or electric drive
Assorted locks, setworks and other parts necessary for building carriage

EDGERS—Table Type
1 4x32 Wheland, with steel tables
1 4x36 Tower, 3-saw, wood tables
1 5x42 Tower, 4 saw, with tables, NEW

EDGERS—Stub Type
1 Fabricated 4x30, 2-saw.
1 Portland Iron Works 4x30, 3-saw.
1 Fabricated 4x32, 4-saw.
1 Portland Iron Works 4x36, 4-saw.
1 Albany 4x42, 4-saw.
1 Tower 6x32, 2-saw.
1 Salem 6x40, 6-saw—3 gang, 3 moveable, new.
1 Albany 6x48, 5-saw.
1 Sumner 8x60, 5-saw.
1 Portland Iron Works 12x60, 6-saw.

SPECIALS NOW IN STOCK

PLANING MILL EQUIPMENT

Large stock good used heads, Disston, Jones & Orth, and Philbrick.

MOULDERS
1 Levi Huston 4x9 4-head, babbit bearing
1 Woods No. 702B 6x15 5-head, babbitt bearing
1 Berlin No. 108 6"x12" 4-head machine, 6-K top, 4-K bottom, 6-K sideheads, belt driven
1 Bamford Premier 6"x4", 6-K, motorized.
1 Smithway 6" XL, motorized.

PLANERS
Woods No. 404C, 6"x24", 8-knife with splitter, motorized ball bearing sideheads
1 Berlin No. 94X, 6x15, 6-knife round heads
1 Woods 404B, 6"x15" 8-K with motors and feed table
1 Stetson-Ross 4A4 16"x20" 6-K belt drive with steel frame feed table
1 Yates No. A4 6x30 6-knife, round heads
1 Woods No. 404 6x15 8-knife, with top and bottom profiles
1 Woods No. 10 12x30 4-knife, square heads
1 Berlin No. 41 14x30 4-knife, square heads
1 Berlin No. 10, 10x20, 4-knife
1 Stetson-Ross No. 4A4 24x30 4-knife, round head, motorized side heads
1 Yates A-1, 8"x15", 4-K round T & B.

HANDLING EQUIPMENT

1 ¼-yd. Quick-Way Crane mounted on GMC 2½-ton truck with back hoe and 30' crane boom — reconditioned.

3 Hyster 54" carriers
2 Hyster 42" carriers
2 Hyster Space Saver lift trucks, Model YT4
1 Shurman Model DDH30 with Ford V-8 power plant, factory unit
1 Star hammerhead gantry crane, 70-ft. boom, 4-ton lumber handling type
1 Gerlinger carrier, 42" pkg.
1 Ross Model 70 rebuilt
2 Yale, Model KM4L, 4,000 lb., battery operated
1 Hyster RT150 lift truck, 15000.

POWERHOUSE EQUIPMENT
1 only Westinghouse 1500-kva 2400-volt steam turbine

RESAWS
1 Mershon 66", L.H.
1 Berlin H6 horizontal with divided infeed and outfeed bed, hydraulic lift
2 Clement 54", feed roll type, left hand
1 Berlin 64", lever set, left hand
1 New Carroll circular, 34" blade, 16x12 opening
1 Berlin 54" L.H. ball brg. overhead flex shaft feed roll drive
1 Berlin No. 260, circular.

POND & DECK SAWS
2 S & W Master drag saws, 30" stroke with 10' blades, elec. motor or gas engine drive

We have other units available, write for description.

SURFACERS
1 American No. 4½ 7"x30", single.
1 American No. 444 8x36 3-knife round motorized, single.
1 Smith 8x24, single.

HOGS & CHIPPERS
1 Diamond No. 25
1 Phoenix No. 36
1 Hesse 64" BB, chipper

AIR COMPRESSORS

Brunner—10 CFM, V belt drive to 2 H.P. motor with Code tank, new.
Brunner—25 CFM, V belt drive to 5 H.P. motor with Code tank, new.
Westinghouse 52 CFM, V belt drive, used.
Gardner Denver Model WBG 315 CFM, V belt drive, used.
Ingersoll Rand Model 75—387 CFM, V Belt drive, used.
Ingersoll Rand—Model 90—515 CFM, V belt drive, used.
Clayton—Cross Compound—465 CFM with unloader — flat belt drive, used.

EVERYTHING FOR
planing mill and sawmill

Diesel Engines • Filing Room Equipment • Electric Motors • Pumps • Deck Machinery • Transfers • Conveyors • Rolls • Shafting • Bearings • Pulleys • Chain — All Type

Send us your inquiries for prompt quotation and shipment

Wire — Phone — Write

CLYDE P. CARROLL

MACHINERY CO.

122 S.W. FIRST AVENUE
PORTLAND 4, OREGON

Phone CA 2-1013
or CA 3-8501

The LUMBERMAN'S Advertising Index for June 14, 1957

These advertisers BELIEVE in the forest industries and are well prepared to serve you.

A

Aeroquip Corporation ... 73
Albany Machine & Supply Company ... 120
American Sheet Metal Works ... 111
American Sisalkraft Corporation ... 33
Anderson Blowpipe & Manufacturing Co. 119
Archer Blower & Pipe Company ... 123
Armstrong Manufacturing Company ... 94
Autocar Division—White Motor Company 90

B

Baldon, F. E. ... 124
Bartlett Electric Company ... 117
Berglund Tractor & Equipment Co. ... 127
Ble-R-Dry, Inc. ... 116
Brook Motor Corporation ... 86
Bruning Co., Inc., Chas. ... 124

C

Caldwell Machinery Co. ... 119
California Blowpipe & Steel Co., Inc. ... 119
Carroll Machinery Co., Clyde P. ... 130
Cascade Machinery Company ... 117
Caterpillar Tractor Company ... 1, 16, 21
Chain Belt Company ... 79
Champion Friction Company ... 118
Chapman Chemical Company ... Cov. 3
Chevrolet Motor Division—General Motors Corp. ... 81
Clark Equipment Company—CMD ... 85, 62-63
Clark Equipment Company—Tarcon ... 14
Coe Manufacturing Company ... 110
Collinson, Del ... 124
Columbia Pacific Corp. ... 124
Columbia Rubber Mills ... 117
Conveyair, Inc. ... 114
Crown Machinery & Supply Co. ... 128
Cunningham Manufacturing Co. ... 119

D

Davies, E. C. ... 123
Disston Div., Henry—H. K. Porter Co. ... 91
Dodge Manufacturing Corp. ... 95
Doernbecher Properties ... 127
Dominion Bridge Co., Ltd. ... 102

E

Evinrude Motors Div.—Outboard Marine Corp. ... 103
Exchange Sawmills Sales Co. ... 116

F

Federal Pipe & Tank Co. ... 124
Filer & Stowell Co., The ... 32
Fischer Marcola Company ... 128
Forest Products Machinery, Inc. ... 96
Foster Co., L. B. ... 118
Franciscan Hotel ... 116
Frick Company ... 27
Friden Calculating Machine Co., Inc. ... 80

G

Galland-Henning Manufacturing Co. ... 113
Gardner-Denver Company ... 28
Gates Rubber Company ... 57
General Machinery Company ... 129
Greenlee Bros. & Company ... 59
Greenlee Tool Company ... 113

H

Hanchett Manufacturing Co. ... 109
Happy Hills Ranch ... 127
Hessler, Herbert ... 124

I

Idaco Engineering & Equipment Co. ... 121
Industrial Air Products Co. ... 105
Industrial Development Co. ... 124
Intermountain Lumber Co. ... 127
Irvington Machine Works ... 15

J

Jacksonville Blow Pipe Company ... 106
Johnson Manufacturing Company ... 110
Jones & Orth Cutter Head Company ... Cov. 4

K

Klamath Iron Works ... 116, 124
Klamath Machine & Locomotive Works ... 24
Koehring-Waterous, Ltd. ... 129

L

L-M Equipment Company ... 101
Lacey Co., The James D. ... 116
Laucks Laboratories ... 113
Ledeen Manufacturing Company ... 70
LeTourneau, Inc., R. G. ... 88-89
Link-Belt Company ... 26
Linn Gear Company ... 130
Lodge & Shipley Co., The ... 97
Luber-Finer, Inc. ... 103

M

Mar Hook & Equipment Co. ... 129
Mator Machine Works ... 108
Mayfair Western Hotel ... 123
McDonough Manufacturing Company ... 107
Medford Machinery Co. ... 124
Michigan-California Lumber Co. ... 127
Micro Switch—A Division of Minneapolis-Honeywell Regulator Co. ... 75
Mill Engineering & Supply Co. ... 66
Minneapolis-Honeywell Regulator Co. ... 75
Modernair Corporation ... 110
Monarch Forge & Machine Works ... 77
Moore Dry Kiln Company ... 78
Murphy Diesel Company ... 87

N

National Machinery Sales ... 122
Newman Machine Company ... 11
Nichols Boat Works ... 118
Nicholson File Company ... 68
Nicholson Manufacturing Co. ... 29, 117
Northwest Chains & Sprockets ... 121
Northwest Engineering Company ... 12
Norton Company, The ... 8

O

O'Brien Co., The John M. ... 125
Ohio Knife Company ... 65

P

Pacific Machinery Company ... 119
Pacific Saw & Knife ... 129
Pacific Telephone & Telegraph Co., The ... 83
Phelps Bros., Inc. ... 117
Peirce Wrapping Machine Co. ... 109
Porter Co. H. K. ... 91
Portland Chain Manufacturing Co. ... 114
Portland Iron Works ... 82
Portland Machinery Co. ... 123, 125
Power Transmission Products ... 92
Prentice Co., E. V. ... 113
Prescott Company, The ... Cov. 2
Prineville Machine & Supply Co. ... 110

R

Rader Pneumatics, Inc. ... 105
Raybestos-Manhattan, Inc. ... 72
Roberts Motor Co. ... 84

S

Salem Equipment & Supply Co. ... 105
Scougal Rubber Mfg. Co. ... 119
Seage Co., Inc., J. B. ... 96
Seattle Boiler Works ... 118
Shell Oil Company ... 4
Signode Steel Strapping Co. ... 2
Simonds Saw & Steel Co. ... 10
Smith Lumber Company, Ralph L. ... 104
Smith, Sam L. ... 126
Smythe Co., Ray ... 117
Soderhamn Machine Mfg. Co. ... 100
Soule Steam Feed Works ... 121
Soule Steel Company ... 31
Spear & Jackson ... 115
Standard Oil Co. of California ... 6
Stanley Works, The ... 74
Stamm Manufacturing Co. ... 119
Stetson-Ross Machine Co. ... 113

T

Texas Company, The ... 34
Thompson & Holmberg ... 124
Towmotor Corp.—Gerlinger Division ... 93
Tri-State Machinery Co. ... 112
Truck & Industrial Equipment Co. ... 114
Tyee Manufacturing Co. ... 124

U

Union Oil Company ... 60
U. S. Borax & Chemical Corp. ... 30
U. S. Department of Interior ... 126
U. S. Steel Co.—Gerrard Steel Strapping ... 71
Utility Trailer Mfg. Co. ... 98

V

Vanderbilt Co., R. T. ... 104

W

Ward Construction Co., M. A. ... 124
Weaver, Charles ... 121
Western Machinery Corp. ... 129
White River Machine Co. ... 22
Wilder Saw Works ... 117
Willamette Valley Lumber Co. ... 128
Williams-White Company ... 76
Wood & Associates, Inc., K. B. ... 124
Wood Company, R. D. ... 13
Wood Treating Chemicals Co. ... 115
Woods Machine Co., S. A. ... 99, 110
Woodworking Machinery Manufacturers Ass'n. ... 23

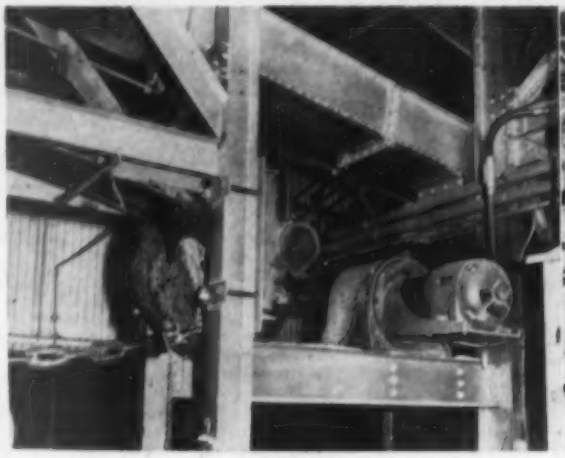
Y

Yale & Towne Manufacturing Co. ... 67

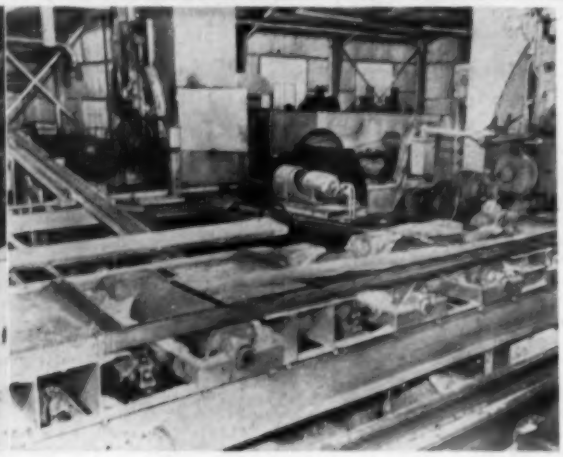
Z

Zidell Machinery & Supply Co. ... 110

While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in preparation of this index.



LOG HAUL DRIVE—30 hp Falk Motoreducer with controlled torque coupling (in center). No cut-out switch is used on this unit, as there is an attendant stationed in the area.



MAIN FUEL CONEYOR Drive—20 hp Falk Motoreducer with controlled torque coupling and cut-out switch. On one occasion, a 1¼x6 chain started to wrap around the sprocket, but the controlled torque coupling slipped, thereby shutting off power.

How Allison Prevents Costly Breakdowns

• To maintain high production schedules and avoid costly shutdowns attributable to machinery breakage, Allison Lumber Company, Bellamy, Alabama, uses 14 Falk Motoreducers equipped with Falk controlled torque couplings.

Each of these units consists of a package drive, including motor and gear unit, into which a positive overload protection device (Falk FT coupling) is incorporated for specified applications.

The engineer determines the overload factor and sets the controlled torque couplings accordingly. At Allison, all 14 controlled torque couplings are set to disengage before an overload can exceed 150% of motor rating.

On those machines which operate without an attendant in the area, the couplings are equipped with automatic cut-out switches.

Yours For The Asking

SUPPLIERS TO FOREST industries are constantly coming up with new and interesting literature describing their products and services. This material is offered free to our readers. Just drop a card or letter to the supplier mentioned. There is no cost or obligation.—Ed.

•***Glue Spreader.*** Bulletin 11-A Part 5 describes and illustrates the new hooded No. 22-D glue spreader arranged for use with contact cements and adhesives. Black Brothers Co., Inc., Mendota, Ill.

• ***"Roller Chain Sprockets."*** New 24-p. price list with complete tabulations as to sizes, alteration charges and full information for determining exact price of sprockets. Write Linn Gear Co., Lebanon, Ore.

• ***"The Newman K-16 tilting arbor variety saw"*** is described and pictured in detail in new circular issued by Newman Machine Co., Greensboro, N. C.

• ***Power Units for Sawmills and Planing Mills.*** New 8-p. folder describing and picturing applications of full line of power units plus specifications. Booklet CR-514-G. Write Construction Equipment Div., International Harvester Co., 180 N. Michigan Ave., Chicago 1, Ill.

• ***"Principles of Trouble Shooting for Cummins Models."*** Chart-type brochure tells of organized study of engine problems and a planned method of procedure for investigating and correcting difficulty. Cummins Engine Co., Inc., Service Division, Columbus, Ind.

• ***Quadruple Lift Attachments.*** Bulletin tells of attachments which allow extra high stacking with industrial lift trucks up to 220" height. Unit still provides for minimum overall truck height with forks in lowered position. Write Yale & Towne Mfg. Co., 11000 Roosevelt Blvd., Philadelphia 15.

•***Micro Switches.*** New circular describes heavy duty precision switches for machine tools and other industrial equipment, very useful for those plants interested in furthering automation. Write Minneapolis-Honeywell Regulator Co., Freeport, Ill.

• A solution for the problem of splitting edge-glued veneer has been developed at the Plylock Plant of the Simpson Logging Co., Portland, Ore. It is accomplished by an application of Crown Zellerbach's gummed paper tape.

The equipment needed for this application can be installed by a millwright at a minimum of expense. It will do these things:

1. Virtually eliminate the splitting of face and back stock as it comes off the edge-gluer, in handling, and in the lay-up operation.
2. Does away with reject veneer due to splitting.
3. Saves approximately 20% of the labor costs in panel patching operation.

Each of the two reels holds 4600 feet of Crown Zellerbach's 1" width, "C" grade Flash-Tite Veneer Tape. The cost to tape a 50" x 100" piece of veneer is approximately 3/10 of a cent, a small investment in comparison to the returns obtained.

More technical information concerning this application may be obtained from Crown Zellerbach Corp., 343 Sansome St., San Francisco.

2 new chemicals

give positive, low-cost grass and weed control

DOW RADAPON*

For grasses, cattails and Phragmites

Here is a new chemical spray which gives positive results on all common grasses. Developed by Dow Chemical Company, RADAPON has proved its effectiveness in exhaustive tests.

Use RADAPON to keep grass out of storage yards, alleys, sidings and ditches. It is effective even on plants in standing water, making chemical control of cattails in ditches practical. RADAPON saves time and money and eliminates use of large crews and heavy equipment to keep ditches clean.

For control of weeds as well as grasses, RADAPON may be mixed with 2-4-D or 2-4-5-T formulations.

DOW BARON*

For both grasses and broad-leaved weeds

Longer-lasting chemical weed control is now possible with new BARON, a non-selective herbicide.

This highly-effective liquid spray is absorbed through both leaves and root system. It remains in the soil for extended periods of time, giving control of germinating seedlings following initial treatment.

BARON controls both broad-leaved weeds and grasses. Use it to eliminate unsightly, unwanted vegetation that creates fire hazards, breeds insects and rodents, and reduces plant efficiency.

**Trade Mark Dow Chemical Company*

Features of Radapon and Baron

Consistent results • Economical
Mix easily with water
Easy to apply • Safe

CHAPMAN®

CHAPMAN CHEMICAL COMPANY

National distributor to the forest products industries of Radapon and Baron for the Dow Chemical Company.

MEMPHIS 1, TENN.

Minneapolis, San Francisco, Portland, Ore., Charlotte, N. C.

Mail coupon for information and prices

Chapman Chemical Company
P. O. Box 138, Memphis 1, Tenn.

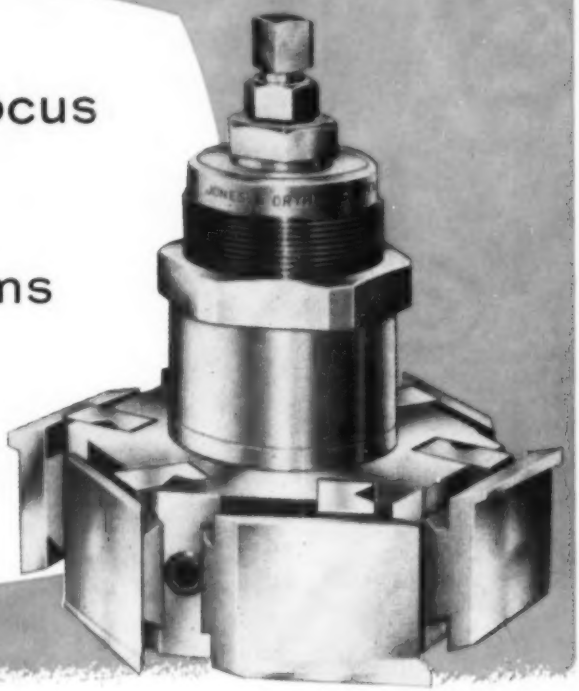
Please send complete data on Radapon and Baron for weed and grass control.

Name _____

Address _____

_____

get a *local* focus on your *local* problems with J&O's NATION-WIDE EXPERIENCE



You heard us right . . . we have *almost* as much know-how on *your* local conditions affecting cutter head operation—as if we were right across the street from you.

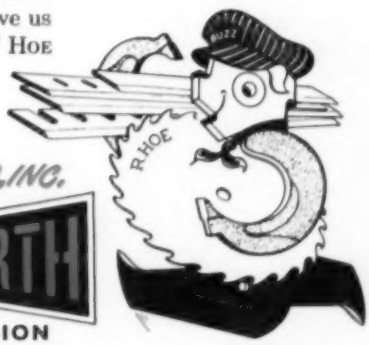
We KNOW there's a lot of difference in regional factors affecting cutter head operation . . . and we know exactly what combination of specifications are predominantly favored in each area, thanks to our continuing analysis of more than 33 years of detailed job records covering every section of the country.

If you want top performance, and the fastest service to meet your local requirements, you can't match what J&O offers. Give us a chance to *prove* it?

"Buzz" Hoe

For manufacturing top grade eased edge dimensions, J&O's dependable H-Type Eased Edge Heads have long been favored in leading plants from coast to coast.

R. Hoe & Co. manufactures a complete line of Carbide Tipped Saws and Tools for cutting wood, plywood, fibreboard, hardboards, laminates, plastics, non-ferrous metals, etc. Ask for catalog!



R. HOE & CO. INC.

JONES & ORTH

CUTTER HEAD DIVISION

BOX 3523, SEATTLE 24, WASH.

HEADQUARTERS: 910 East 138th Street, New York 54, N. Y.

MANUFACTURING AND WAREHOUSE BRANCHES

CHICAGO • BIRMINGHAM • MEMPHIS • SEATTLE

PORTLAND, ORE. • HIGH POINT, N. C.

©1957—R. HOE

C-4

CHISEL TOOTH SAWS • SOLID TOOTH CIRCULAR SAWS • BITS AND SHANKS • FILES
GRINDING WHEELS • METAL AND WOOD CUTTING BAND SAWS • CARBIDE TIPPED
SAWS AND TOOLS • CUTTER HEADS • SPECIAL FORM KNIVES • MACHINE KNIVES